

Subjects of Joint Research

平成18年度 共同利用課題一覧(前期) Joint Research List (2006 First Term)

嘱託研究員 (Commission Researcher)

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
1	レーザー加熱ダイヤモンドアービル装置における測温技術の開発	近藤 忠	東北大学	理学研究科	Development of temperature measurement system for laser-heated diamond anvils	Tadashi Kondo	Tohoku University
2	超強磁場下における半導体短周期超格子の遠赤外磁気光学効果に関する研究	百瀬 英毅	大阪大学	低温センター	Far-infrared magnetooptics in short period semiconductor superlattices under Mega-Gauss magnetic fields	Hideki Momose	Osaka University
3	単層カーボンナノチューブの超強磁場下遠赤外特性の研究	横井 裕之	熊本大学	工学部	Far-infrared optical study of single-walled carbon nanotubes under ultra-high magnetic fields	Hiroyuki Yokoi	Kumamoto University
4	一巻きコイル法を用いた超強磁場磁化測定	香取 浩子	理化学研究所	中央研究所	Measurements of magnetic properties in ultra-high fields using a single-turn coil technique	Hiroko Katori	The Institute of Physical and Chemical Research (former) National Institute for Materials Science
5	半導体中の電子・正孔複合体と強磁場効果(II)	梅原 雅捷	岡山大学	前物質・材料研究機構	Complexes of electrons and holes in semiconductors under high magnetic fields(II)	Masakatsu Umehara	Okayama University
6	多孔性配位高分子に吸着した酸素分子の強磁場磁化測定	小林 達生	北海道教育大学	教育学部	Magnetization process of molecular oxygen adsorbed in microporous coordination polymers	Tatsuo Kobayashi	Hokkaido University of Education
7	高压下の比熱測定装置の開発	高柳 滋	横浜国立大学	工学研究院	Development of apparatus for specific heat measurements under high pressure	Shigeru Takayanagi	Izuru Umehara
8	"	梅原 出	京都大学	人間・環境学研究科	"	Naoki Fujiiwara	Yokohama National University
9	压力下NMR測定法に関する開発	藤原 直樹	岡山大学	教育学部	Development of NMR measurement method under high pressure	Yoshihiko Inada	Kyoto University
10	チャコール式 ³ He冷凍機の装置の開発	稻田 佳彦	香川大学	教育学部	Development of a charcoal type ³ He refrigerator	Makoto Isoda	Okayama University
11	Fe ₂ Pにおける圧力下電気抵抗測定	礒田 誠	大阪市立大学	理学研究科	Effect of Pressure on the Electrical Resistivity of Fe ₂ P	Kiizo Murata	Kagawa University
12	有機伝導体の圧力効果	村田 恵三	大阪市立大学	理学研究科	Effect of pressure on the organic conductor		Osaka City University

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13	多重極限関連装置の調整	高橋 博樹	日本大学	文理学部	Adjustment of Cubic Anvil apparatus	Hiroki Takahashi	Nihon University
14	極端紫外レーザーの研究	富樫 格	理化学研究所	播磨研究所	Study of extreme ultra violet laser	Tadashi Togashi	The Institute of Physical and Chemical Research
15	Bi系超伝導体の角度分解光電子分光	竹内 恒博	名古屋大学	エコトピア科学研究所	Angle-resolved photoemission study on high Tc cuprate	Tsunehiro Takeuchi	Nagoya University
16	YBCOフィルムの光電子分光	岡崎 浩三	名古屋大学	理学研究科	Photoemission study on YBCO film	Kozo Okazaki	Nagoya University
17	有機化合物の光電子分光	金井 要	名古屋大学	理学研究科	Photoemission study on organic compounds	Kaname Kanai	Nagoya University
18	固体の発光実験	河合 潤	京都大学	工学研究科	Soft-x-ray emission spectroscopy on solids	Jun Kawai	Kyoto University
19	高分解能光電子分光による強相関物質の研究	横谷 尚睦	岡山大学	自然科学研究科	Ultra-high resolution study on strongly correlated materials	Takayoshi Yokoya	Okayama University
20	レーザーおよび放射光の同時照射の研究	鎌田 雅夫	佐賀大学	シンクロトロン光応用研究センター	Coincidence spectroscopy between laser and synchrotron radiation	Masao Kamada	Saga University
21	準結晶の高分解能光電子分光	田村 隆治	東京理科大学	基礎工学部	High-resolution photoemission study on quasi crystals	Ryuji Tamura	Tokyo University of Science
22	共鳴逆光電子分光装置の開発	樋口 透	東京理科大学	理学部	Development of resonant inverse photoemission spectroscopy	Tohru Higuchi	Tokyo University of Science
23	光電子分光法を用いた各種分子性結晶の電子状態の研究及び装置の低温化	木須 孝幸	理化学研究所	中央研究所	Research on electron state of molecular crystals using photoemission spectroscopy	Takayuki Kisu	The Institute of Physical and Chemical Research
24	強相関系物質の共鳴逆光電子分光の研究	木村 真一	自然科学研究機構	分子科学研究所	Resonant inverse photoemission study on strongly correlated materials	Shinichi Kimura	National Institute of Natural Sciences
25	X線非弹性散乱の研究	石井 啓文	Synchrotron Radiation Research	X-ray inelastic scattering spectroscopy on solids	Hirofumi Ishii	Synchrotron Radiation Research Center	
26	酸化バナジウムの高分解能光電子分光	江口 律子	理化学研究所	播磨研究所	Photoemission study on vanadium oxides	Ritsuko Eguchi	The Institute of Physical and Chemical Research
27	マンガンペロブスカイトの高分解能光電子分光	堀場 弘司	理化学研究所	播磨研究所	Photoemission study on Mn perovskite	Koji Horiba	The Institute of Physical and Chemical Research
28	4f電子系物質の高分解能光電子分光	松波 雅治	理化学研究所	播磨研究所	Photoemission study on 4f materials	Masaharu Matsunami	The Institute of Physical and Chemical Research
29	希土類金属化合物の非占有電子状態解析	手塚 泰久	弘前大学	理工学部	Study of un-occupied electronic states of lanthanide compounds	Yasuhsisa Tezuka	Hirosaki University

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30	高輝度放射光を利用する有機薄膜光電子分光ビームラインの設計	上野 信雄	千葉大学	工学部	Design of photoemission spectroscopy beamline for organic materials	Nobuo Ueno	Chiba University
31	高輝度放射光を利用する有機固体分光実験設備の基本設計	関 一彦	名古屋大学	理学研究科	Study for basic design of solid state spectroscopy experimental station organic materials	Kazuhiko Seki	Nagoya University
32	高輝度放射光仕様発光実験装置の開発	曾田 一雄	名古屋大学	工学部	Development of soft-x-ray emission spectroscopy for using high brilliance synchrotron radiation	Kazuo Soda	Nagoya University
33	二次元表示型スピinn分解光電子エネルギー分析器の開発	大門 寛正	奈良先端科学技術大学院大学	基礎工学研究科	Development of 2D display type spin resolved photoelectron energy analyzer	Hiroshi Daimon	Nara Institute of Science and Technology
34	高輝度放射光を用いた固体分光実験設備の基本設計	西 滋正	大阪大学	理学研究科	Study for basic design of solid state spectroscopy experimental using high brilliance synchrotron radiation	Shigemasa Suga	Osaka University
35	高輝度放射光における表面化学生研究用コインシングルス分光ビームラインの設計	田中 健一郎	広島大学	放射光科学研究センター	Design coincidence spectroscopy for surface chemistry beam line	Kenichiro Tanaka	Hirosshima University
36	軟X線発光分光及び高分解能光電子分光実験の検討	谷口 雅樹	広島大学	シクロotron光応用研究センター	Investigation of research plans of soft X-ray spectroscopy and high resolution photo electron spectroscopy	Masaki Taniguchi	Hirosshima University
37	レーザーと放射光を組み合わせた分光研究	鍛田 雅夫	佐賀大学	都市教養学部	Combined spectroscopic study of laser and SR	Masao Kamada	Saga University
38	コヒーレント放射光を用いた分光研究	宮原 恒昱	首都大学東京	都市教養学部	Spectroscopic study coherent synchrotron radiation	Tsuneaki Miyahara	Tokyo Metropolitan University
39	高輝度放射光を用いた固体分光実験設備の基本設計	佐藤 繁	東北工業大学	高エネルギー加速器研究機構	Design study of experimental station for solid state spectroscopy using high brilliance synchrotron radiation	Shigeru Sato	Tohoku Institute of Technology
40	高輝度放射光計画の光源設計及び加速器の開発	神谷 幸秀	高エネルギー加速器研究機構	高エネルギー加速器研究施設	Design and research of accelerators for the high-brilliance light source	Yukihide Kamiya	High Energy Accelerator Research Organization
41	高輝度放射光を利用する原子分光実験設備の基本設計	柳下 明	高エネルギー加速器研究機構	物質構造科学研究所	Design study of experimental station for atomic spectroscopy using high brilliance synchrotron radiation	Akira Yagishita	High Energy Accelerator Research Organization
42	高輝度放射光における表面化学生研究用コインシングルス分光ビームラインの設計	間瀬 一彦	高エネルギー加速器研究機構	物質構造科学研究所	Design coincidence spectroscopy for surface chemistry beam line	Kazuhiko Mase	High Energy Accelerator Research Organization
43	表面化学反応研究用大フラックスビームラインの設計	宇理須 恒雄	自然科学研究機構	分子科学研究所	Design of high-flux beam line for surface chemistry	Tsuneo Urisu	National Institute of Natural Sciences
44	高輝度放射光を利用する分子分光実験設備の基本設計	小杉 信博	自然科学研究機構	分子科学研究所	Design of molecular spectroscopy experimental station	Nobuhiro Kosugi	National Institute of Natural Sciences
45	光電子顕微鏡による磁性ナノ構造物質の磁化過程	木下 豊彦	高輝度光科学研究センター		Magnetization in process of magnetic nano structure by PEEM	Toyohiko Kinoshita	Japan Synchrotron Radiation Institute
46	入射線型加速器の研究	設楽 哲夫	高エネルギー加速器研究機構	高エネルギー加速器研究施設	Research of linear accelerator for high-brilliance light sources	Tetsuo Shidara	High Energy Accelerator Research Organization

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47	線型加速器のビーム制御に関する研究	佐藤 政則	高エネルギー加速器研究機構	加速器研究施設	Study of beam control in linear accelerators	Masanori Sato	High Energy Accelerator Research Organization
48	高周波加速空洞の開発研究	伊澤 正陽	高エネルギー加速器研究機構	物質構造科学研究所	Development of RF accelerating cavity for high-brilliance light sources	Masahiro Izawa	High Energy Accelerator Research Organization
49	ライス設計及び色収差に関する研究	小林 幸則	高エネルギー加速器研究機構	物質構造科学研究所	Study of lattice design and chromaticity correction for high-brilliance light sources	Yukinori Kobayashi	High Energy Accelerator Research Organization
50	真空システムの開発設計	堀 洋一郎	高エネルギー加速器研究機構	物質構造科学研究所	Study of vacuum system in high-brilliance light sources	Yoichiro Hori	High Energy Accelerator Research Organization
51	電子ビームモニタの設計	本田 融	高エネルギー加速器研究機構	物質構造科学研究所	Research of electron beam monitors for high-brilliance light sources	Toru Honda	High Energy Accelerator Research Organization
52	挿入光源の研究	山本 樹	高エネルギー加速器研究機構	物質構造科学研究所	Study of insertion devices in high-brilliance light sources	Shigeru Yamamoto	High Energy Accelerator Research Organization
53	挿入光源磁場のビームへの影響に関する研究	原田 健太郎	高エネルギー加速器研究機構	物質構造科学研究所	Study of effects of insertion-device fields on electron beam in a high-brilliance light source	Kentaro Harada	High Energy Accelerator Research Organization
54	制御システムの開発研究	佐藤 佳裕	高エネルギー加速器研究機構	物質構造科学研究所	Study of control system for high-brilliance light sources	Yoshihiro Sato	High Energy Accelerator Research Organization
55	電磁石及び高周波加速システムの開発研究	小関 忠	高エネルギー加速器研究機構	加速器研究施設	Research of magnet and RF systems for high-brilliance light sources	Tadashi Koseki	High Energy Accelerator Research Organization
56	光源加速器の研究	熊谷 敦孝	高輝度光科学研究中心		Study of accelerators of high-brilliance light sources	Noritaka Kumagai	Japan Synchrotron Radiation Institute
57	中性子散乱装置のアップグレード後の研究計画の実施と共同利用の推進	岩佐 和晃	東北大学	理学研究科	Upgrade of neutron scattering instruments and promotion of the ISSP user program at JRR-3	Kazuaki Iwasa	Tohoku University
58	"	大山 研司	東北大学	金属材料研究所	"	Kenji Ohyama	Tohoku University
59	"	平賀 晴弘	東北大学	金属材料研究所	"	Haruhiro Hiraka	Tohoku University
60	"	野田 幸男	東北大学	多元物質科学研究所	"	Yukio Noda	Tohoku University
61	"	日野 正裕	京都大学	原子炉実験所	"	Masahiro Hino	Kyoto University
62	"	河原崎 修三	大阪大学	理学研究科	"	Shuzo Kawarasaki	Osaka University
63	"	日高 昌則	九州大学	理学研究院	"	Masanori Hidaka	Kyushu University

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64	中性子散乱装置のアップグレード後の研究計画の実施と共同利用の推進	大竹 淑恵	理化学研究所	和光研究所	Upgrade of neutron scattering instruments and promotion of the ISSP user program at JRR-3	Yoshie Otake	The Institute of Physical and Chemical Research
65	中性子極小角散乱実験装置のアップグレード	金子 純一	北海道大学	工学研究科	Upgrade of the ultra-small angle diffractometer	Junichi Kaneko	Hokkaido University
66	"	古坂 道弘	北海道大学	工学研究科	"	Michihiro Furusaka	Hokkaido University
67	Ce ₂ Pd ₃ Si ₅)の単結晶試料評価とその圧力効果	藤原 哲也	山口大学	理工学研究科	Effect of Pressure on the Ce ₂ Pd ₃ Si ₅ Single Crystal	Tetsuya Fujiwara	Yamaguchi University
68	高輝度光源ビームラインにおける分光光学系の設計・開発	大橋 治彦	高輝度光科学研究センター	放射光研究所	Design of the new undulator beamline at Spring-8	Naruhiko Ohashi	Japan Synchrotron Radiation Research Institute
69	中性子散乱用高压セルの開発および高压下における中性子散乱実験	藤原 哲也	山口大学	理工学研究科	Neutron Scattering Experiments under High Pressure and Development of High Pressure Cell for Neutron Scattering	Tetsuya Fujiwara	Yamaguchi University

一般研究員 (General Researcher)

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
1	水素ハイドレートの高压・低温合金	平井 寿子	筑波大学	生命環境科学 研究科	Synthesis of hydrogen hydrate under high pressure and low temperature	Hisako Hirai	University of Tsukuba
2	"	町田 真一	筑波大学	生命環境科学 研究科	"	Shin-ichi Machida	University of Tsukuba
3	"	小長井 敬介	筑波大学	生命環境科学 研究科	"	Keisuke Konagai	University of Tsukuba
4	下部マントル起源のダイヤモンドに含まれる含有物に関する研究	鍵 裕之	東京大学	理学系研究科	Observations of mineral and fluid inclusions in diamonds originating from lower mantle	Hiroyuki Kagi	The University of Tokyo
5	"	小竹 翔子	東京大学	理学系研究科	"	Shoko Odake	The University of Tokyo
6	カルボナードダイヤモンド(天然多結晶ダイヤモンド)中の含有物周辺の分光観察	福良 哲史	東京大学	理学系研究科	Spectroscopic observations around the inclusions in natural polycrystalline diamond, carbonado	Satoshi Fukura	The University of Tokyo
7	ペイ共役高分子のピエゾクロミズム	山本 隆一	東京工業大学	資源化學研究所	Piezochromism of π-conjugated polymers	Takakazu Yamamoto	Tokyo Institute of Technology
8	"	佐藤 貴夫	東京工業大学	総合理工学研究科	"	Takao Sato	Tokyo Institute of Technology
9	ダイアモンドアンビルのレーザー穴空け加工	奥地 拓生	名古屋大学	環境学研究科	Laser drilling of diamond anvils for high-pressure diamond anvil cell NMR (continued)	Takuo Okuchi	Nagoya University

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10	三角格子磁性誘電体のNMR	大濱 哲夫	千葉大学	自然科学研究科	NMR in triangular-lattice magnetic ferroelectrics	Tetsuo Ohama	Chiba University
11	"	伊藤 大輔	千葉大学	自然科学研究科	"	Daisuke Itoh	Chiba University
12	擬一次元磁性体TiOB _r の逐次相転移とスピノン状態の核磁気共鳴・核四重極共鳴による研究	菊池 淳	明治大学	理工学部	NMR and NQR studies of successive phase transitions and spin states in quasi-one-dimensional TiOB _r	Jun Kikuchi	Meiji University
13	バナジウム酸化物ナノチューブの ⁵¹ V-NMR	樹神 克明	日本原子力研究開発機構	量子ビーム応用研究部門	⁵¹ V-NMR study on nanotube of vanadium oxide	Katsuaki Kodama	Japan Atomic Energy Agency
14	希土類化合物PrPb ₃ とPr _{1-x} La _x Pb ₃ の電気四極子秩序のペルス強磁场での超音波実験	後藤 輝孝	新潟大学	自然科学研究科	Ultrasonic measurements under pulse magnetic-field effect on quadrupolar ordering of PrPb ₃ and Pr _{1-x} La _x Pb ₃	Terutaka Goto	Niigata University
15	"	福浦 基	新潟大学	自然科学研究科	"	Motoi Fukaura	Niigata University
16	希土類化合物Ce _x La _{1-x} B ₆ の強磁場超音波測定	根本 祐一	新潟大学	自然科学研究科	Ultrasonic measurements under high magnetic fields in Ce _x La _{1-x} B ₆	Yuichi Nemoto	Niigata University
17	"	渡辺 智行	新潟大学	自然科学研究科	"	Tomoyuki Watanabe	Niigata University
18	CaCoO系の磁気物性及び磁気抵抗効果の研究	山田 輿治	埼玉大学	工学部	Investigation on Magnetism and Magnetoresistance in CaCoO system	Koji Yamada	Saitama University
19	第2種超伝導体の温の研究	町田 一成	岡山大学	自然科学研究科	Research on vortices in type II superconductors	Kazushige Machida	Okayama University
20	Ce _x La _{1-x} B ₆ :IV相へのPrイオン添加化合物の極低温磁化測定による多極子秩序の研究	世良 正文	広島大学	先端物質科学研究所	Study of the Multipolar ordering in Pr ion doped Ce _x La _{1-x} B ₆ (phase IV) by the low temperature magnetization measurement	Masafumi Sera	Hiroshima University
21	"	近藤 規弘	広島大学	先端物質科学研究所	"	Akihiro Kondo	Hiroshima University
22	ベクトルマグネットを用いたスピノンアイス化合物の磁誘起新奇相転移の研究	松平 和之	九州工業大学	工学部	Study of a novel phase transition in a magnetic field in the spin ice compound using a vector magnet	Kazuyuki Matsubara	Kyushu Institute of Technology
23	ベータ鉄シリサイドおよびマグネシウムシリサイド単結晶の光学特性評価	鶴巣 治彦	茨城大学	工学部	Characterizations of optical properties of β -FeSi ₂ and Mg ₂ Si single crystal	Haruhiko Udono	Ibaraki University
24	擬1次元DMET塩の伝導体の電子状態の分光学的研究	伊東 裕	名古屋大学	工学研究科	Spectroscopic study on the electronic state of quasi-one-dimensional conductors	Hiroshi Ito	Nagoya University
25	有機薄膜の低温物性測定(Ⅷ)	鳥塚 潔	神奈川工科大学		Measurements of low temperature properties of organic thin films (VII)	Kiyoshi Torizuka	Kanagawa Institute of Technology
26	フェロセン系電荷移動錯体の合成と物性評価	持田 智行	東邦大学	理学部	Synthesis and properties of ferrocene-based charge-transfer complexes	Tomoyuki Mochida	Toho University

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
27	フェロセン系電荷移動錯体の合成と物性評価	赤坂 隆拓	東邦大学	理学研究科	Synthesis and properties of ferrocene-based charge-transfer complexes	Takahiro Akasaka	Toho University
28	分子結晶の磁性と構造	菅野 忠	明治学院大学	法学部	Magnetism and Structures of Molecular Crystals	Tadashi Sugano	Meiji Gakuin University
29	低次元磁性体の熱力学・動力学	山本 昌司	北海道大学	理学研究科 基礎物理学研究所	Thermodynamics and quantum dynamics of low-dimensional magnets	Shoji Yamamoto	Hokkaido University
30	一次元スピン系の動力学と素励起描像	有川 晃弘	京都大学	量子ビーム応用研究部門	Dynamics and elementary excitation pictures in 1D spin systems	Mitsuhiko Arikawa	Kyoto University
31	低次元磁性体の統計力学	坂井 徹	日本原子力研究開発機構	Statistical Mechanics of Low-Dimensional Magnets	Toru Sakai	Japan Atomic Energy Agency	
32	量子多体系における位相的秩序の解析	長谷部 一氣	詫間電波工業高等専門学校	Analyses of topological order in quantum many body systems	Kazuki Hasebe	Takuma National College of Technology	
33	スピノホール効果の理論的研究	御領 潤	青山学院大学	理工学部	Theoretical investigation for spin Hall effect	Jun Goryo	Aoyama Gakuin University
34	スピノン偏極電流駆動による磁性体磁壁の動的振る舞いの直接観察	戸川 放彦	理化研究所	フロンティア研究システム	Direct observation of dynamics of magnetic-domain wall driven by spin-polarized current	Yoshihiko Togawa	The Institute of Physical and Chemical Research
35	低速電子ビーム法による表面吸着水素の動的挙動の研究	金沢 育三	東京学芸大学	教育学部	Study of the dynamical behavior of hydrogens adsorbed on surface by slow positron beam	Ikuzo Kanazawa	Tokyo Gakugei University
36	"	広田 幸二	東京学芸大学	教育学研究科	"	Kouji Hirota	Tokyo Gakugei University
37	結晶表面の原子配列制御	川村 隆明	山梨大学	教育人間科学 教育部	Control of atomic arrangement on a crystal surface	Takaaki Kawamura	University of Yamanashi
38	Ge(001)表面および、Ag, 吸着Ge (001)表面の電子状態の第一原理計算	石井 規	鳥取大学	工学部	First-principle's calculation for electronic structure of Ge(001) and Ag adsorbed Ge(001) surface	Akira Ishii	Tottori University
39	Si(111)表面上のベンジウム吸着(2×2)構造と相転移のSTM観察	柄原 浩	九州大学	総合理工学研究院	STM observation of an In adsorbed(2×2) structure and phase transition by STM	Hiroshi Tochihara	Kyushu University
40	"	白澤 徹郎	九州大学	総合理工学府	"	Tetsuroh Shirasawa	Kyushu University
41	"	ビシコフスキ アントン	九州大学	総合理工学府	"	Visilov's'kiy Anton	Kyushu University
42	表面3元規則合金の形成過程のSTM観察	柄原 浩	九州大学	総合理工学研究院	STM observation of the formation process of ordered surface ternary alloys	Hiroshi Tochihara	Kyushu University
43	"	東 相吾	九州大学	総合理工学府	"	Shougo Higashi	Kyushu University

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44	KFM観察 半導体表面近傍に存在するドーベント原子の	酒井 明	京都大学	国際融合創造センター	KFM observation of subsurface dopant atoms on semiconductor surfaces	Akira Sakai	Kyoto University
45	"	小林 賢吾	京都大学	工学研究科	"	Kengo Kobayashi	Kyoto University
46	大学間データ共有へ向けたマテリアル・インフォマ ティクス手法の開発	福村 知昭	東北大学	金属材料研究所	Development of an application of material informatics for sharing experimental results among universities	Tomoteru Fukumura	Tohoku University
47	"	上野 和紀	東北大学	金属材料研究所	"	Kazunori Ueno	Tohoku University
48	"	池田 将洋	東北大学	理学研究科	"	Masahiro Ikeda	Tohoku University
49	放射光分光を用いた遷移金属酸化物薄膜・超格 子の電子状態の研究	組頭 広志	東京大学	工学系研究科	Synchrotron analysis of electronic structures of the thin films and superlattices based on transition metal oxides	Hiroshi Kunigashira	The University of Tokyo
50	"	近松 彰	東京大学	工学系研究科	"	Akira Chikamatsu	The University of Tokyo
51	"	摩庭 篤	東京大学	工学系研究科	"	Atsushi Maniwa	The University of Tokyo
52	遷移金属酸化物を用いた抵抗変化型不揮発メ モリーカードのコンピュータリアル作製	大久保 勇男	東京大学	工学系研究科	Combinatorial fabrication of non volatile memory device based on transition metal oxide	Isoo Ohkubo	The University of Tokyo
53	"	坪内 賢太	東京大学	工学系研究科	"	Kenta Tsubouchi	The University of Tokyo
54	同軸直衝突イオン散乱分光法による金属ガラス 薄膜の相転移観測	松本 祐司	東京工業大学	応用セラミックス 研究所	Observation of phase transition in metallic glass thin film by CAICISS	Yuji Matsumoto	Tokyo Institute of Technology
55	薄膜合成と新規酸化物発見のためのソフトウェア ツールの開発	日黒 伸也	物質・材料研究 機構	Development of software tools for thin film synthesis and discovery of new oxide	"	Shinya Megro	National Institute for Material Science
56	量子流体の表面物性の研究	河野 公俊	理化学研究所	中央研究所	Surface Study of Quantum Fluids	Kimitoshi Kono	The Institute of Physical and Chemical Research
57	"	斎藤 政通	理化学研究所	中央研究所	"	Masamichi Saitoh	The Institute of Physical and Chemical Research
58	超強磁場下における半導体短周期超格子のサイ クロトロン共鳴に関する研究	百瀬 英毅	大阪大学	低温センター	Cyclotron resonance in short period semiconductor superlattices under mega gauss magnetic fields	Hideki Momose	Osaka University
59	"	濱口 智尋	高知工科大学	"	"	Chihiro Hamaguchi	Kochi University of Thechnology
60	"	岡井 宏樹	大阪大学	工学研究科	"	Hiroki Okai	Osaka University

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61	高分散单層カーボンナノチューブ配向膜の超強磁場下光吸収特性	横井 裕之	熊本大学	工学部	Optical-absorption study of highly isolated and aligned single wall nanotube films under ultrahigh magnetic fields	Yokoi Hiroyuki	Kumamoto University
62	"	ムフタル フェンディ	熊本大学	自然科学研究科	"	Mukhtar Effendi	Kumamoto University
63	"	森 啓一郎	熊本大学	自然科学研究科	"	Keiichiro Mori	Kumamoto University
64	CuFe _{1-x} Al _x O ₂ の強磁場磁化過程	満田 節生	東京理科大学	理学部	Magnetization process of CuFe _{1-x} Al _x O ₂ under strong magnetic field	Setsuo Mitsuda	Tokyo University of Science
65	"	金策 俊介	東京理科大学	理学研究科	"	Syunsuke Kanetsuki	Tokyo University of Science
66	フラストレート磁性体の強磁場磁化測定	香取 浩子	理化学研究所	中央研究所	Magnetization measurements of frustrated magnets in ultra-high fields	Hiroko Katori	The Institute of Physical and Chemical Research
67	"	星 武道	埼玉大学	理工学研究科	"	Takemichi Hoshi	Saitama University
68	Ce化合物の強磁場物性	海老原 孝雄	静岡大学	理学部	Physical Properties in Ce compounds at High Magnetic Fields	Takao Ebihara	Shizuoka University
69	"	森下 健治	静岡大学	理工学研究科	"	Kenji Morishita	Shizuoka University
70	新規量子スピニ系の強磁場磁化課程測定	菊池 彦光	福井大学	工学部	High field magnetization measurements on new quantum spin magnets	Hikomitsu Kikuchi	University of Fukui
71	"	藤井 裕	福井大学	工学部	"	Yutaka Fujii	University of Fukui
72	"	佐々木 隆曉	福井大学	工学研究科	"	Takaaki Sakaki	University of Fukui
73	新しい二次元正方格子磁性体の磁化測定	陰山 洋	京都大学	理学研究科	Magnetization measurement of two-dimensional square lattice antiferromagnet	Hiroshi Kageyama	Kyoto University
74	"	大場 紀章	京都大学	理学研究科	"	Noriaki Oba	Kyoto University
75	"	馬場 洋一	京都大学	理学研究科	"	Yoichi Baba	Kyoto University
76	強磁場高圧下での磁化測定	萩原 政幸	大阪大学	極限科学研究センター	Magnetization measurement under high pressure and high magnetic field	Masayuki Hagiwara	Osaka University
77	"	千田 敏子	大阪大学	理学研究科	"	Atsuko Senda	Osaka University

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78	近藤半導体YbB ₁₂ の準定常強磁場下の磁化および磁気抵抗	伊賀 文俊	広島大学	先端物質科学 研究科	Magnetization and magnetoresistance effect of Kondo semiconductor YbB ₁₂ in quasi-stable high magnetic field	Fumitoshi Iga	Hiroshima University
79	量子スピン系の磁化過程における金属絶縁体転移モデルの検証	稻垣 祐次	九州大学	工学研究院	Metal-insulator transition in the magnetization process of quantum spin system	Yuji Inagaki	Kyushu University
80	"	浅野 貴行	九州大学	理学研究院	"	Takayuki Asano	Kyushu University
81	RMn ₆ Sn ₆ およびRMn ₆ Ge ₆ (R=rear earth)合金の強磁場磁化過程	堀 富栄	芝浦工業大学	システム工学部	High field magnetization process for RMn ₆ Sn ₆ and RMn ₆ Ge ₆ (R=rear earth) alloys	Tomiei Hori	Shibaura Institute of Technology
82	メタ磁性を示すスピネル型酸化物の強磁場磁化・磁気抵抗測定	新高 誠司	理化学研究所	中央研究所	High-field magnetization and magnetoresistivity measurements of spinel-type oxides exhibiting metamagnetism	Seiji Niitaka	The Institute of Physical and Chemical Research
83	ペレスマグネットを用いた強磁場下におけるCoO単結晶の磁化測定および磁歪測定	吉川 明子	理化学研究所	播磨研究所	Magnetostriction and magnetization measurements of CoO single crystal in pulsed high magnetic fields	Akiko Kikkawa	The Institute of Physical and Chemical Research
84	パルスマグネットを用いた強磁場下におけるGdB ₄ 単結晶の磁化・磁気抵抗測定	吉川 明子	理化学研究所	播磨研究所	Magnetization measurements of GdB ₄ single crystal in pulsed high magnetic fields	Akiko Kikkawa	The Institute of Physical and Chemical Research
85	低温下における金属中の水素の量子効果	原田 修治	新潟大学	工学部	Quantum effects of hydrogen in metals under low temperature	Shuji Harada	Niigata University
86	"	荒木 秀明	長岡工業高等専門学校	"	"	Hideaki Araki	Nagaoka National College of Technology
87	擬一次元伝導体DMET膜の強磁場電子状態の研究	伊東 裕	名古屋大学	工学研究科	Studies on electronic state of quasi-one-dimensional DMET conductors under high magnetic field	Hiroshi Ito	Nagoya University
88	強相関型セリウム化合物の量子相転移と磁性	村山 茂幸	室蘭工業大学	工学部	Quantum phase transition and magnetism in the strongly correlated Ce compounds	Shigeyuki Murayama	Muroran Institute of Technology
89	"	雨海 有佑	室蘭工業大学	工学研究科	"	Yusuke Amakai	Muroran Institute of Technology
90	"	堀井 剛志	室蘭工業大学	工学部	"	Tsuyoshi Horii	Muroran Institute of Technology
91	キュービックアンビルプレスを用いた β' -型BEDSe-TTF系有機伝導体の研究	谷口 弘三	埼玉大学	理学部	Study of β' -BEDSe-TTF-based organic conductors using cubic anvil press	Hiromi Taniguchi	Saitama University
92	"	片山 和弘	埼玉大学	理工学研究科	"	Kazuhiro Katayama	Saitama University
93	YbMn ₂ Ge ₂ の高压力下熱膨張測定	才賀 裕太	埼玉大学	理工学研究科	Thermal expansion measurement of YbMn ₂ Ge ₂ under high pressure	Yuta Saiga	Saitama University
94	CeRhSi ₃ の断熱法による高压下比熱測定	梅原 出	横浜国立大学	工学研究院	Specific heat measurement of CeRhSi ₃ under high pressure by adiabatic method	Izuru Umehara	Yokohama National University

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95	CeRhSi ₃ の断熱法による高圧下比熱測定	富岡 史明	横浜国立大学	工学府	Specific heat measurement of CeRhSi ₃ under high pressure by adiabatic method	Fumiaki Tomioka	Yokohama National University
96	Pr ₂ Ba ₄ Cu ₇ O _{15-δ} の低温における超伝導	石川 文洋	新潟大学	自然科学研究科	Superconductivity on Pr ₂ Ba ₄ Cu ₇ O _{15-δ} in low temperatures	Fumihiro Ishikawa	Niigata University
97	反転対称性のないセリウム化合物の量子臨界点付近の物性	中島 美帆	信州大学	理学部	Physical properties around the magnetic quantum critical point in Cerium compounds without inversion symmetry	Miho Nakashima	Shinshu University
98	三角格子反強磁性体における圧力効果	中辻 知	京都大学	国際融合創造センター	Study of pressure effects on triangular antiferromagnets	Satoru Nakatsujii	The University of Tokyo
99	"	小沼 圭介	京都大学	理学研究科	"	Keisuke Onuma	Kyoto University
100	Feを含む反強磁性体における圧力効果	中辻 知	京都大学	国際融合創造センター	Study of pressure effects on Fe based antiferromagnets	Satoru Nakatsujii	The University of Tokyo
101	"	久我 健太郎	京都大学	理学研究科	"	Kentaro Kuga	Kyoto University
102	Ce ₂ PdGe ₆ の電子状態の圧力効果	撰待 力生	大阪大学	理学研究科	High-pressure effects on the electronic state in Ce ₂ PdGe ₆	Rikio Settai	Osaka University
103	"	奥田 悠介	大阪大学	理学研究科	"	Yusuke Okuda	Osaka University
104	ステイック式冷凍機を用いた極低温磁気測定	稻田 佳彦	岡山大学	教育学部	Magnetization measurement with a stick type cryostat	Yoshihiko Inada	Okayama University
105	"	渡部 陽平	岡山大学	教育学研究科	"	Youhei Watanabe	Okayama University
106	偏壓電子メガ磁性体MnFe(P,Ge)及びMnFe(P,As)の圧力効果	高畠 敏郎	広島大学	先端物質科学研究科	Pressure effect of itinerant electron magnet MnFe(P,As) and MnFe(P,Ge)	Toshiro Takabatake	Hiroshima University
107	"	薮田 久人	広島大学	先端物質科学研究科	"	Hisato Yabuta	Hiroshima University
108	ErCu ₂ Si ₂ 単結晶の磁化過程とその圧力効果	繁岡 透	山口大学	理学部	Pressure effect of magnetization processes on ErCu ₂ Si ₂ single crystal	Toru Shigeoka	Yamaguchi University
109	"	田中 満	山口大学	理工学研究科	"	Mituru Tanaka	Yamaguchi University
110	TbCu ₂ Si ₂ の磁気転移とその圧力効果	繁岡 透	山口大学	理学部	Pressure effect of magnetic transitions on TbCu ₂ Si ₂	Toru Shigeoka	Yamaguchi University
111	"	麻生 由紀	山口大学	理工学研究科	"	Yuki Asou	Yamaguchi University

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112	小数キャリア系CeSbの高圧下(P>8GPa)における電気・磁気特性と構造相転移との相関	岡山 泰	佐賀大学	理工学部	Correlation of electronic and magnetic properties with structural phase transition in the low carrier density system CeSb under high pressure (P>8 GPa)	Yasushi Okayama	Saga University
113	"	江木 孝幸	佐賀大学	工学系研究科	"	Takayuki Egi	Saga University
114	ホイスラー型合金Ru _{2-x} Fe _x CrSiの圧力効果	廣井 政彦	鹿児島大学	理学部	The effects of pressure on the properties of the Heusler alloys Ru _{2-x} Fe _x CrSi	Masahiko Hiroi	Kagoshima University
115	"	六角 繼美	鹿児島大学	理工学研究科	"	Tsugumi Rokkaku	Kagoshima University
116	希土類金属間化合物RCO ₂ 系の輸送特性への圧力効果	矢ヶ崎 克馬	琉球大学	理学部	Pressure effect on transport properties of the intermetallic compounds of RCo ₂	Katsuma Yagasaki	University of the Ryukyus
117	"	仲間 隆男	琉球大学	理学部	"	Takao Nakama	University of the Ryukyus
118	"	高江洲 義尚	琉球大学	理工学研究科	"	Yoshinao Takaesu	University of the Ryukyus
119	"	竹田 政貴	琉球大学	理工学研究科	"	Masataka Takeda	University of the Ryukyus
120	8GPaを超える超高压下での磁場下での有機伝導体の物性	村田 恵三	大阪市立大学	理学研究科	Electronic Properties of organic conductors beyond 8 Gpa under Magnetic Field	Keizo Murata	Osaka City University
121	"	安塚 周磨	大阪市立大学	理学研究科	"	Syuma Yasuzuka	Osaka City University
122	"	藤本 勉	大阪市立大学	理学研究科	"	Tsutomu Fujimoto	Osaka City University
123	秩序相を示すIr酸化物に対する圧力下における輸送現象測定	中野 智仁	早稲田大学	理工学部	Transport measurements of Ir oxide under pressure	Tomohito Nakano	Waseda University
124	導電性ラングミュア・プロジェクト膜の高圧下の電気的性質	三浦 康弘	桐蔭横浜大学	工学研究科	Electrical Properties of Conductive Langmuir-Blodgett Films under High Pressure	Yasuhiro Miura	Toin University of Yokohama
125	"	松井 春樹	桐蔭横浜大学	工学研究科	"	Haruki Matsui	Toin University of Yokohama
126	新規なアクチノイド化合物の創成とエキソチック磁性・超伝導の探索	松田 達磨	日本原子力研究開発機構	先端基礎研究センター	Developments of exotic magnetism and superconductivity in new actinide compounds	Tatsuma Matsuda	Japan Atomic Energy Agency
127	"	池田 修悟	日本原子力研究開発機構	先端基礎研究センター	"	Shugo Ikeda	Japan Atomic Energy Agency
128	ウランカルコゲナライ化合物における電子状態の圧力効果	池田 修悟	日本原子力研究開発機構	先端基礎研究センター	The high-pressure effect of an electronic state in uranium chalcogenide compounds	Shugo Ikeda	Japan Atomic Energy Agency

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129 圧力効果	ウランカルコゲナイ化合物における電子状態の 変化	松田 達磨	日本原子力研 究開発機構	先端基礎研究セ ンター	The high-pressure effect of an electronic state in uranium chalcogenide compounds	Tatsuma Matsuda	Japan Atomic Energy Agency
130	"	芳賀 芳範	日本原子力研 究開発機構	先端基礎研究セ ンター	"	Yoshinori Haga	Japan Atomic Energy Agency
131 製と構造評価	希薄窒化物半導体混晶薄膜及びヘテロ構造の作 成と構造評価	尾鍋 研太郎	東京大学	新領域創成科 学研究所	Fabrication and structural study of dilute nitride semiconductor alloy films and heterostructures	Kentaro Onabe	The University of Tokyo
132	"	中島 史博	東京大学	新領域創成科 学研究所	"	Fumihiro Nakajima	The University of Tokyo
133	"	窪谷 茂幸	東京大学	新領域創成科 学研究所	"	Shigeyuki Kuboya	The University of Tokyo
134	"	ティユ クアン トゥ	東京大学	新領域創成科 学研究所	"	Thieu Quan Tu	The University of Tokyo
135 と構造評価	立法晶窒化物半導体混晶及びヘテロ構造の作製 と構造評価	片山 龍二	東京大学	新領域創成科 学研究所	Fabrication and structural study of zinc-blende nitride semiconductor alloy films and heterostructures	Ryuji Katayama	The University of Tokyo
136	"	小牧 弘典	東京大学	新領域創成科 学研究所	"	Hironori Komaki	The University of Tokyo
137	"	中村 照幸	東京大学	新領域創成科 学研究所	"	Teruyuki Nakamura	The University of Tokyo
138	"	河野 雅俊	東京大学	新領域創成科 学研究所	"	Masatoshi Kohno	The University of Tokyo
139 る研究	窒素原子層ドーピング半導体の発光特性に関する 研究	矢口 裕之	埼玉大学	工学部	Study on the luminescence properties of nitrogen atomic layer doped semiconductors	Hiroyuki Yaguchi	Saitama University
140	"	遠藤 雄太	埼玉大学	理工学研究科	"	Yuta Endo	Saitama University
141 テカルロシミュレーション	GaAs(110)結晶成長の第一原理計算と動的モン テカルロシミュレーション	石井 晃	鳥取大学	工学部	First-principle's calculation and kinetic Monte Carlo simulation for the epitaxial growth of GaAs(110)	Akira Ishii	Tottori University
142	窒素を含むMBE成長化合物半導体超短周期超 格子構造の光学特性の評価	小柴 俊	香川大学	工学部	Optical Characterizations of MBE grown Nitride and Composite Semiconductor Ultra Short Periodic Super	Shyun Koshiba	Kagawa University
143	"	藤井 健輔	香川大学	工学研究科	"	Kennsuke Fujii	Kagawa University
144	低温電子線励起酸化によるシリコン表面上の極薄 酸化膜成長過程の電子分光測定	大野 真也	横浜国立大学	工学研究院	Photoemission study of ultrathin oxide film growth process on silicon surfaces by low-temperature electron-stimulated oxidation	Shin-ya Ohno	Yokohama National University
145	"	田中 正俊	横浜国立大学	工学研究院	"	Masatoshi Tanaka	Yokohama National University

No.	研究題目	氏名	所属機関	所属部署	Title	Name	Organization
146	低温電子線励起酸化によるシリコン表面上の極薄酸化膜成長過程の電子分光測定	首藤 健一	横浜国立大学	工学研究院	Photoemission study of ultrathin oxide film growth process on silicon surfaces by low-temperature electron-stimulated oxidation	Ken-ichi Shudo	Yokohama National University
147	"	九鬼 隆良	横浜国立大学	工学研究府	"	Takayoshi Kuki	Yokohama National University
148	モンテカルロ法による合金の相変態、相安定性の研究と新物質の探索	神藤 欣一	東京工業大学	総合理工学研究科	Study of Phase Stability and Transformation of Alloys and Design of New Materials by Monte Carlo Method	Kin-ichi Jindo	Tokyo Institute of Technology
149	規則格子Rb ₂ Mn ₂ O ₆ のNMRによる研究	大野 隆	徳島大学	工学部	NMR study of Lattice Ordered RBaMn ₂ O ₆	Takashi Ohno	Tokushima University
150	低次元量子スピinn系の量子相転移に対する数値的研究	原田 健自	京都大学	情報学研究科	Numerical study of quantum critical phase transition in low dimensional quantum spin models	Kenji Harada	Kyoto University
151	過冷却ポリオールのnearly constant dielectric loss	野崎 龍介	北海道大学	理学研究科	Nearly constant dielectric loss of polyalcohols	Ryuusuke Nozaki	Hokkaido University
152	"	蓑口 あゆみ	北海道大学	ベンチャービジネス・ラボラトリ	"	Ayumi Minoguchi	Hokkaido University
153	"	外川 一	北海道大学	理学研究科	"	Hiroomi Sotokawa	Hokkaido University
154	熱容量測定から見た過冷却ポリオールのガラス転移	蓑口 あゆみ	北海道大学	ベンチャービジネス・ラボラトリ	Study of the glass transition of polyalcohols by heat capacity measurements	Ayumi Minoguchi	Hokkaido University
155	"	加藤 美保子	北海道大学	理学研究科	"	Mihoko Kato	Hokkaido University
156	細い円筒容器内超流動ヘリウム3の量子流体力学的研究	石川 修六	大阪市立大学	理学研究科	Study on quantum fluid dynamics of superfluid He-3 in a narrow cylinder	Osamu Ishikawa	Osaka City University
157	"	石黒 亮輔	大阪市立大学	理学研究科	"	Ryousuke Ishiguro	Osaka City University
158	回転超流動 ³ HeのNMR実験	松原 明	京都大学	低温物質科学研究センター	NMR Measurements on Rotating Superfluid ³ He	Akira Matsubara	Kyoto University
159	"	佐々木 豊	京都大学	低温物質科学研究センター	"	Yutaka Sasaki	Kyoto University
160	"	國松 貴之	京都大学	低温物質科学研究センター	"	Takayuki Kunimatsu	Kyoto University
161	ラマン分光法によるIII-V-N混晶半導体の微視的な構造変化に関する研究	矢口 裕之	埼玉大学	工学部	Raman study of microscopic structural changes in III-V-N alloy semiconductors	Hiroyuki Yaguchi	Saitama University
162	"	谷岡 健太郎	埼玉大学	理工学研究科	"	Kentaro Tanioka	Saitama University

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
163	C ₆₀ アニオノラジカル塩単結晶の磁気特性	森山 広思	東邦大学	理学部	Magnetic Properties of Single-crystal C ₆₀ Anion Radical Salts	Hiroshi Moriyama	Toho University
164	"	杉浦 崇仁	東邦大学	理学部	"	Takahito Sugura	Toho University
165	新しい二次元正方格子磁性体の磁化測定	辻本 吉廣	京都大学	理学研究科	Magnetization measurement of two-dimensional square lattice antiferromagnet	Yoshihiro Tsujimoto	Kyoto University
166	"	セドリック タッセル	京都大学	理学研究科	"	Cedric Tassel	Kyoto University
167	Ce ₂ PdGe ₆ の電子状態の圧力効果	河井 友也	大阪大学	理学研究科	High-pressure effects on the electronic state in Ce ₂ PdGe ₆	Tomoya Kawai	Osaka University
168	ペロブスカイト型Mn酸化物薄膜における磁気抵抗特性及び電荷整列ドメインの観察	中島 智彦	産業技術総合研究所	先進製造プロセス研究部門	Magnetoresistance and Charge Order Domains in Perovskite Manganite Thin Films	Tomohiko Nakajima	National Institute of Advanced Industrial Science and Technology
169	近藤半導体YbB ₁₂ の準定常強磁場下の磁化および磁気抵抗	道村 真司	広島大学	先端物質科学研究科	Magnetization and magnetoresistance effect of Kondo semiconductor YbB ₁₂ in quasi-stable high magnetic field	Shinji Michimura	Hiroshima University
170	新スクリューダイド化合物TbT ₄ P ₁₂ (T=Fe, Os)の高圧合成	城谷 一民	室蘭工業大学	工学部	High pressure synthesis of new skutterudite compounds TbT ₄ P ₁₂ (T=Fe and Os)	Ichimin Shirotani	Muroran Institute of Technology
171	"	杉内 陽平	室蘭工業大学	工学研究科	"	Youhei Sugiuchi	Muroran Institute of Technology
172	ナノ構造の電気伝導測定のための金探針カンチレバーを用いたAFMシグマライ手法の開発	秋山 琴音	東北大学	金属材料研究所	Development of nano lithography with a metal-tip cantilever using non-contact AFM for electrical condition measurement of nanostructure	Kotone Akiyama	Tohoku University
173	静水圧8GPaを超える超高压下の有機伝導体の物理性	有本 太郎	大阪市立大学	理学研究科	Electronic Properties of organic conductors beyond 8 GPa	Taro Arimoto	Osaka City University
174	酸化亜鉛調節ドープ超格子構造における荷電効率	牧野 哲征	兵庫県立大学	理学部	Spectroscopic studies of charged excitons in zinc-oxide based modulation-doped superlattice structures	Takayuki Makino	University of Hyogo
175	"	瀬川 勇三郎	理化研究所	フロンティア研究システム	"	Yusaburo Segawa	Institute of Physical and Chemical Research
176	ナノ磁性体の応用研究	河村 紀一	NHK放送技術研究所			Norikazu Kawamura	NHK Science and Technical Research Laboratories
177	TbCu ₂ Si ₂ の磁気転移とその圧力効果	金沢 綾子	山口大学	理工学研究科	Pressure effect of magnetic transitions on TbCu ₂ Si ₂	Ayako Kanazawa	Yamaguchi University

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
1	分子性伝導体における強相関効果の研究	稻辺 保	北海道大学	理学研究科	Study on the strong correlation effect in molecular conductors	Tamotsu Inabe	Hokkaido University
2	"	Yu, Derrick, E.	北海道大学	理学研究科	"	Yu, Derrick, E.	Hokkaido University
3	"	石川 学	北海道大学	理学研究科	"	Manabu Ishikawa	Hokkaido University
4	フラックス法を用いた重い電子系化合物Li _x V ₂ O ₄ 単結晶育成とその評価	松下 能孝	東京大学	理学系研究科	Crystal growth and characterization of heavy fermion compound, LiV ₂ O ₄ using flux method	Yoshitaka Matsushita	Natural Institute for Material Science
5	二次元正方格子磁性化合物群の化学評価と単結晶育成	陰山 洋	京都大学	理学研究科	Chemical characterization and crystal growth of square lattice antiferromagnets	Hiroshi Kageyama	Kyoto University
6	"	大場 紀章	京都大学	理学研究科	"	Noriaki Oba	Kyoto University
7	"	安田 淳	京都大学	理学研究科	"	Jun Yasuda	Kyoto University
8	強相関系遷移金属酸化物の透過電子顕微鏡法による研究	中山 則昭	山口大学	工学部	TEM study of strongly correlated transition metal oxide systems	Noriaki Nakayama	Yamaguchi University
9	"	佐藤 啓	山口大学	理工学研究科	"	Akira Satou	Yamaguchi University
10	パリクロア型希土類酸化物の単結晶育成と磁気 フラストレーションの研究	松平 和之	九州工業大学	工学部	Single crystal growth of pyrochlore rare earth oxides and a study of the pyrochlore frustrated magnets	Kazuyuki Matsushita	Kyushu Institute of Technology
11	二次元正方格子磁性化合物群の化学評価と単結晶育成	セトワツ タッセル	京都大学	理学研究科	Chemical characterization and crystal growth of square lattice antiferromagnets	Cedric Tassel	Kyoto University

物質合成・評価設備Gクラス(Materials Synthesis and Characterization G Class Researcher)

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
1	ボロン系およびアルミニ系正20面体クラスター固体の電子物性に関する研究	木村 薫	東京大学	新領域創成科学研究科	Electronic Properties of Boron- and Aluminum-based Icosahedral Cluster Solids	Kaoru Kimura	The University of Tokyo
2	"	兵藤 宏	東京大学	新領域創成科学研究科	"	Hirosi Hyoudou	The University of Tokyo
3	精密物性測定のためのオリビン大型単結晶の育成	佐藤 博樹	大阪大学	理学研究科	Synthesis of olivine large crystals for precise measurements of physical properties	Hiroki Sato	Osaka University

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
4 成	精密物性測定のためのオリビン大型単結晶の育成	熊取谷 瑞穂	大阪大学		Synthesis of olivine large crystals for precise measurements of physical properties	Mizuho Kumatoriya	Osaka University
5	ケイ酸塩単結晶の合成	金澤 英樹	京都大学	人間・環境学研究科	Synthesis of single crystal of silicates	Hideki Kanazawa	Kyoto University
6	電気化学的手法により強磁場中で合成されたナノカーボンの形狀に関する研究	横道 治男	富山県立大学		Study of morphology for nano-carbons synthesized by electrochemical method under high magnetic field	Haruo Yokomichi	Toyama Prefectural University
7	高温対応圧電単結晶材料Al置換 $\text{La}_3\text{Nb}_{0.5}\text{Ga}_{5.5}\text{O}_{14}$ の構造解析	武田 博明	奈良先端科学技術大学院大学		Structure analysis of Al-substituted $\text{La}_3\text{Nb}_{0.5}\text{Ga}_{5.5}\text{O}_{14}$ piezoelectric single crystals operatable at high temperature	Hiroaki Takeda	Nara Institute of Science and Technology
8	超臨界流体 CO_2 における非平衡プラズマの材料合成プロセスへの応用	寺嶋 和夫	東京大学	新領域創成科学研究科	Applications to materials synthesis by nonequilibrium plasmas in a supercritical carbon dioxide	Kazuo Terashima	The University of Tokyo
9	"	久保 裕丈	東京大学	新領域創成科学研究所	"	Hirotake Kubo	The University of Tokyo
10	超臨界 CO_2 雰囲気において発生させた非平衡プラズマを用いた金属薄膜堆積への応用	筈居 高明	東京大学	新領域創成科学研究所	Application to deposition of metal films by nonequilibrium plasmas generated under supercritical CO_2	Takaaki Tomai	The University of Tokyo
11	収束イオンビーム加工機を用いた窒化物半導体フォトニックヘテロ構造の作製と光物理応用	片山 龍二	東京大学	新領域創成科学研究所	Fabrication of the nitride semiconductor photonic heterostructures using focused ion beam system	Ryuji Katayama	The University of Tokyo
12	非超電導ナノ粒子を添加した溶融成長バルク超電流体の構造組織の研究	和泉 充	東京海洋大学	海洋工学部	Study of Microstructure of Melt Growth Bulk Superconductors by Addition of Nano-size Particles	Mitsuru Izumi	Tokyo University of Marine Science and Technology
13	"	徐 彩宣	東京海洋大学	海洋科学技術研究所	"	Caixuan Xu	Tokyo University of Marine Science and Technology
14	$\text{Mg}-3\% \text{Al}-1\% \text{Zn}$ 合金の超微細粒組織の観察	河野 紀雄	千葉工業大学	工学部	Ultrafine-grained microstructures of $\text{Mg}-3\text{mass\%Al}-1\text{mass\%Zn}$ alloys	Norio Kono	Chiba Institute of Technology
15	"	佐々木 正則	千葉工業大学	工学部	"	Masanori Sasaki	Chiba Institute of Technology
16	新規ナノマテリアルの合成と構造評価	緒方 啓典	法政大学	工学部	Synthesis and Structural Study of Novel Nano Materials	Hironori Ogata	Hosei University
17	高性能希土類磁性材料の構造解析	齋藤 哲治	千葉工業大学	工学部	Structural analysis of high-performance rare earth magnetic materials	Tetsuji Saito	Chiba Institute of Technology
18	光電子分光及び軟X線磁気円二色性を用いた磁性半導体の研究	藤森 淳	東京大学	新領域創成科学研究所	Photoemission and soft x-ray magnetic circular dichroism study of diluted magnetic semiconductor	Atsushi Fujimori	The University of Tokyo
19	ホイスラー型合金の磁性と伝導の研究	廣井 政彦	鹿児島大学	理学部	Study on magnetic and electrical properties of Heusler alloys	Masahiko Hiroi	Kagoshima University
20	"	小関 健介	鹿児島大学	理工学研究科	"	Kensuke Koseki	Kagoshima University

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
21	カーボンナノチューブに内包された金属炭化物の超伝導に関する研究	吉田 喜孝	いわき明星大学	理工学部	Superconductivity in metal carbides encapsulated in carbon nanotubes	Yositaka Yosida	Iwaki Meisei University
22	機能性遷移金属錯体の磁気物性	秋津 貴城	慶應義塾大学	理工学部	Magnetic properties of transition metal complexes for advanced materials	Takashiro Akitsu	Keio University
23	融液成長複合材料の高温腐食特性に及ぼす水蒸気吸湿の影響	原田 祥久	産業技術総合研究所	先進製造プロセス研究部門	Effect of Water Uptake of Melt Growth Composites in High-Temperature Corrosion	Yoshihisa Harada	National Institute of Advanced Industrial Science and Technology

長期留学研究員 (Long Term Young Researcher)

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
1	新規有機伝導体における圧力下の輸送現象	森中 直紀	東邦大学	理学研究科	Pressure dependence of transport properties for new organic conductors	Naoki Morinaka	Toho University
2	低次元的にトラップされた原子気体の性質の解析	得能 光行	東京工業大学	理工学研究科	Analysis of the properties of low-dimensionally-trapped atom gases	Akiyuki Tokuno	Tokyo Institute of Technology
3	量子スピニン系の理論的研究	石川 陽平	東京工業大学	理工学研究科	Theoretical Study of Quantum Spin System	Yohei Ishikawa	Tokyo Institute of Technology
4	物性におけるトポロジカル不変量の応用	三田村 陽平	東京工業大学	理工学研究科	Applications of topological invariants to condensed matter	Yohei Mitamura	Tokyo Institute of Technology
5	不純物を含む1次元電子系におけるTomonaga-Luttinger流体の研究	松尾 武史	千葉大学	自然科学研究科	Study for Tomonaga-Luttinger liquid in one-dimensional electron system with impurity	Takeshi Matsuo	Chiba University
6	原子間力顕微鏡・ケルビングローブ法による半導体表面でのドンシェル測定	野村 淳士	東京理科大学	基礎工学研究科	Measurement of potential profiles on semiconductor surfaces by atomic force microscopy and Kelvin force microscopy	Atsushi Nomura	Tokyo University of Science

短期留学研究員 (Short Term Young Researcher)

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
1	重い電子系化合物CeRu ₂ Si ₂ および元素置換系における量子相転移と磁性	堀井 剛志	室蘭工業大学	工学研究科	Quantum phase transition and magnetism in heavy-fermion compounds CeRu ₂ Si ₂	Tsuyoshi Horii	Muroran Institute of Technology

中性子(Neutron Scattering Researcher)

No.	研究題目	代表者名	所属機関	所属部局	Title	Name	Organization
2	溶融CuBr及び混合系の局所構造	武田 信一	九州大学	理学研究院	Local structure of molten CuBr and the mixtures	Shinichi Takeda	Kyushu University
3	$^{35}\text{Cl}/^{37}\text{Cl}$ 同位体位置換法中性子回折によるイオン-交換樹脂内における塩化物イオンの局所構造解分析	龜田 康男	山形大学	理学部	Environmental Structure of the Chloride Ion in Ion Exchange Resins Studied by Means of Neutron Diffraction with $^{35}\text{Cl}/^{37}\text{Cl}$ Isotopic Substitution Method	Yasuo Kameda	Yamagata University
4	強相關5f電子系化合物の圧力効果	網塙 浩	北海道大学	理学研究院	Effects of Pressure on Strongly Correlated 5f Electron Systems	Hiroshi Amitsuka	Hokkaido University
5	重い電子反強磁性体CeRh ₂ Si ₂ の一軸応力、静水圧による量子相転移	田畑 吉計	大阪大学	理学研究科	Quantum phase transition in heavy fermion antiferromagnet CeRh ₂ Si ₂ induced by uniaxial and hydrostatic pressure	Yoshikazu Tabata	Osaka University
6	重い電子系Ce(R _{1-x} Rh _x) ₂ (Si _{1-y} Ge _y) ₂ における量子磁気秩序の研究	田畑 吉計	大阪大学	理学研究科	Study on the long range magnetic order in quantum critical region in heavy fermion system Ce(R _{1-x} Rh _x) ₂ (Si _{1-y} Ge _y) ₂	Yoshikazu Tabata	Osaka University
7	磁性超伝導体CeRhIn ₅ および関連物質における磁性の研究	佐藤 憲昭	名古屋大学	理学研究科	Neutron scattering study on magnetism of the magnetic superconductor CeRhIn ₅ and related materials	Noriaki Sato	Nagoya University
8	p波超伝導Sr ₂ RuO ₄ の超伝導転移温度以下のスピン揺動	古川 はづき	お茶の水女子大学	理学部	Spin Fluctuations in the superconducting state of the p-wave superconductor Sr ₂ RuO ₄	Hazuki Furukawa	Ochanomizu University
9	新奇超伝導CeCoIn ₅ における電子スピinの役割解明	古川 はづき	お茶の水女子大学	理学部	Roles of Spins in new exotic superconductor CeCoIn ₅	Hazuki Furukawa	Ochanomizu University
10	Nd _{2-x} Sr _x MnO ₄ のスピn波	久保田 正人	高エネルギー加速器研究機構	物質構造科学研究所	Magnon in Nd _{2-x} Sr _x MnO ₄	Masato Kubota	High Energy Accelerator Research Organization
11	Ce115系化合物における量子臨界現象と磁性	横山 淳	茨城大学	理学部	Quantum critical phenomena and magnetism in Ce115 compounds	Makoto Yokoyama	Ibaraki University
12	反強磁性量子相転移の研究	門脇 広明	首都大学東京	理学研究科	Quantum Critical Point of Antiferromagnetic Phase Transitions	Hiroaki Kadowaki	Tokyo Metropolitan University
13	フラストレート系擬Ising磁性体CuFeO ₂ の構造相転移と磁気励起	満田 節生	東京理科大学	理学部	Magnetic excitation and structural phase transition in frustrated quasi-Ising magnet CuFeO ₂	Setsuo Mitsuda	Tokyo University of Science
14	フラストレートした磁性体CuFeO ₂ の磁場誘起強誘電相(ODS状態)の探査	満田 節生	東京理科大学	理学部	Field induced orthogonal double sinusoidal (ODS)magnetic state in the frustrated magnet CuFeO ₂	Setsuo Mitsuda	Tokyo University of Science
15	希土類化合物(La _{1-x} Er _x)Ni ₂ Ge ₂ の異方的磁気相転移	田畑 吉計	大阪大学	理学研究科	Anisotropic magnetic phase transition in rare earth intermetallic compound (La _{1-x} Er _x)Ni ₂ Ge ₂	Yoshikazu Tabata	Osaka University
16	多段階メタ磁性転移を示すCeIr ₃ Si ₂ の磁気構造分析	室 裕司	東京理科大学	理工学部	Magnetic structure study of the multi-step metamagnetism in CeIr ₃ Si ₂	Muro Yujii	Tokyo University of Science
17	準周期磁性体Zn-Mg-(Y, R) (R = Ce, Pr, Yb)の物性研究	鬼丸 孝博	東京大学	物性研究所	Neutron Scattering on the Quasicrystalline Magnets Zn-Mg-(Y, R) (R = Ce, Pr, Yb)	Takahiro Onimaru	The University of Tokyo
18	ランダム磁性体における異なる磁気相間・磁気励起の共存とそれとの時間発展	元屋 清一郎	東京理科大学	理工学部	Coexistence and Time Evolution of Magnetic Correlations and Excitations in Random Magnets	Kyoichiro Motoya	Tokyo University of Science

No.	研究題目	代表者名	所属機関	所属部局	Title	Name	Organization
19	RENi ₂ B ₂ Cの磁性と超伝導	永田 貴志	お茶の水女子大学	理学部	Magnetism on the superconducting material RENi ₂ B ₂ C	Takashi Nagata	Ochanomizu University
20	カーボンナノチューブに吸着された分子の構造	門脇 広明	首都大学東京	理学研究科	Structural properties of molecules adsorbed in carbon nanotube	Hiroaki Kadowaki	Tokyo Metropolitan University
21	Ba-Ti-O系強誘電体の構造相転移とフォノン分散	重松 宏武	島根大学	教育学部	Structural phase transitions and phonon dispersions in Ba-Ti-O system ferroelectrics	Hirotake Shigematsu	Shimane University
22	硫安系酸化物誘電体の仮想相転移に寄与するソフトモードの振る舞い、	重松 宏武	島根大学	教育学部	Behavior of Soft modes that contribute to the hypothetical phase transition in Beta-K ₂ SO ₄ type ferroelectrics	Hirotake Shigematsu	Shimane University
23	TbMnO ₃ のスピノン構造と強誘電分極の相關	有馬 孝尚	東北大学	多元物質科学研究所	Correlation between spin structure and ferroelectric polarization in TbMnO ₃	Takahisa Arima	Tohoku University
24	Pr ₃ Pd ₂₀ Ge ₆ における結晶場励起と磁場誘起相転移	網塚 浩	北海道大学	理学研究院	Crystal-Field Excitations and Field-Induced Phase Transition in Pr ₃ Pd ₂₀ Ge ₆	Hirosi Amitsuka	Hokkaido University
25	磁気モーメントの大きな元素による置換効果を用いたLSCO系における磁気相関の起源の研究	藤田 全基	東北大学	金属材料研究所	Study for the origin of spin correlations in the LSCO system through doping effect of magnetic ion with large moment	Motoki Fujita	Tohoku University
26	CuB ₂ O ₄ におけるスクリューマグнет体の單一磁区の生成	秋光 純	青山学院大学	理工学部	Screw Domain Formation of Magnetic Structure in CuB ₂ O ₄	Jun Akimitsu	Aoyama Gakuin University
27	Lu ₂ Cr ₂ O ₇ の軌道整列の直接観測	秋光 純	青山学院大学	理工学部	Direct Observation of Orbital Ordering in Lu ₂ Cr ₂ O ₇	Jun Akimitsu	Aoyama Gakuin University
28	Sr _{0.75} Y _{0.25} CoO _{3-δ} の軌道整列の直接観測	秋光 純	青山学院大学	理工学部	Direct Observation of Orbital Ordering in Sr _{0.75} Y _{0.25} CoO _{3-δ}	Jun Akimitsu	Aoyama Gakuin University
29	磁気秩序相を持つNa _{0.5} CoO ₂ のスピノン波励起	佐藤 正俊	名古屋大学	理学研究科	Magnetic Excitation Spectra of Na _{0.5} CoO ₂	Masatoshi Sato	Nagoya University
30	UGe ₂ およびURhGeにおける強磁性と超伝導の共存状態の研究	佐藤 憲昭	名古屋大学	理学研究科	neutron scattering investigation on the correlation between ferromagnetism and superconductivity of UGe ₂ and URhGe		
31	URu ₂ Si ₂ の隠れた秩序	桑原 康太郎	首都大学東京	理学研究科	Hidden order in URu ₂ Si ₂	Keitaro Kuwabara	Nagoya University
32	Ce115系化合物における量子臨界現象と磁性	横山 淳	茨城大学	理学部	Quantum critical phenomena and magnetism in Ce115 compounds	Makoto Yokoyama	Ibaraki University
33	ハロゲン架橋型ニッケル錯体の磁気励起	伊藤 晋一	高エネルギー加速器研究機構	物質構造科学研究所	Magnetic excitations in halogen bridged nickel complex	Shinichi Ito	High Energy Accelerator Research Organization
34	CoCr ₂ O ₄ のスピノン波	富安 啓輔	高エネルギー加速器研究機構	物質構造科学研究所	Spin wave in CoCr ₂ O ₄	Keisuke Tomiyasu	High Energy Accelerator Research Organization
35	CrB ₂ の磁気励起	秋光 純	青山学院大学	理工学部	Magnetic Excitation in CrB ₂	Jun Akimitsu	Aoyama Gakuin University

No.	研究題目	代表者名	所属機関	所属部局	Title	Name	Organization
36	$\text{Co}_3\text{V}_2\text{O}_8$ における逐次相転移とmultiferroic相	佐藤 正俊	名古屋大学	理学研究科	Successive transitions and multiferroic phase in $\text{Co}_3\text{V}_2\text{O}_8$	Masatoshi Sato	Nagoya University
37	3元合金CuMnP ₆ における動的磁気構造	高橋 美和子	筑波大学	数理物質科学 研究科	Dynamical magnetic structure in CuMnP ₆ ternary alloy	Miwako Takahashi	University of Tsukuba
38	ランダム磁性体における異なる磁気相関・磁気励起の共存とそれらの時間発展	元屋 清一郎	東京理科大学	理工学部	Coexistence and Time Evolution of Magnetic Correlations and Excitations in Random Magnets	Kyoichiro Motoya	Tokyo University of Science
39	FeNiイノベー合金の垂直磁気成分	角田 賴彦	早稲田大学	理工学術院	Transvers Spin Component in FeNi Invar Alloy	Yorihiko Tsunoda	Waseda University
40	酸素ガス吸着磁性体の中性子散乱	益田 隆嗣	横浜市立大学	国際総合科学 研究科	Neutron scattering in an O ₂ absorbent magnet	Takatsugu Masuda	Yokohama City University
41	2次元反強磁性体Ba ₂ MnGe ₂ O ₇ の磁性	益田 隆嗣	横浜市立大学	国際総合科学 研究科	Magnetism in 2D antiferromagnet Ba ₂ MnGe ₂ O ₇	Takatsugu Masuda	Yokohama City University
42	Cu ₂ (Fe _{1-x} Sc _x) ₂ Ge ₄ O ₁₃ の異常なCu ²⁺ イマー励起	益田 隆嗣	横浜市立大学	国際総合科学 研究科	Anomalous Cu dimer excitation in Cu ₂ (Fe _{1-x} Sc _x) ₂ Ge ₄ O ₁₃	Takatsugu Masuda	Yokohama City University
43	新しいS=1/2鎖NaV(WO ₄) ₂ の磁気励起	益田 隆嗣	横浜市立大学	国際総合科学 研究科	Magnetic excitation in a new S=1 chains material NaV(WO ₄) ₂	Takatsugu Masuda	Yokohama City University
44	S=1/2正方格子磁性体(CuX)LaNb ₂ O ₇ (X=Cl,Br) の磁性	陰山 洋	京都大学	理学研究科	Magnetism of S=1/2 square lattice antiferromagnets (CuX)LaNb ₂ O ₇ (X=Cl,Br)	Hiroshi Kageyama	Kyoto University
45	立方晶PbTiO ₃ のフォーラン分散	留野 泉	秋田大学	教育文化学部	Phonon dispersion in cubic PbTiO ₃	Izumi Tomono	Akita University
46	二次変態の挙動を示すマルテンサイトTiPdFe Alloy フォーラン分散関係	大庭 卓也	鳥取大学	総合理工学部	Phonon Dispersion in Martensitic Material TiPdFe Alloy showing 2nd order feature	Takuya Onba	Shimane University
47	プロトン伝導体K ₃ H(SeO ₄) ₂ のフォノン測定	鹿内 文仁	高エネルギー加速器研究機構 物質構造科学 研究所	物質構造科学 研究所	Phonon measurements on protonic conductor K ₃ H(SeO ₄) ₂	Fumiaki Shikanai	High Energy Accelerator Research Organization
48	細孔中におけるアモルファススチレンのフリジ ティー評価	筑紫 格	千葉工業大学	工学部	Fragility evaluation of amorphous styrene in porous silica	Itaru Tsukushi	Chiba Institute of Technology
49	シンジオタクチックポリスチレン δ 相における高分子鎖の運動性	川口 辰也	大阪大学	理学研究科	Dynamics of polymer chain in syndiotactic polystyrene delta phase	Tatsuya Kawaguchi	Osaka University
50	高分子ブレンドの相溶性の波数依存性	金谷 利治	京都大学	化学研究所	Dependent wave number for miscibility of polymer mixture	Toshiji Kanaya	Kyoto University
51	ラメラ構造を有するプロックポリマーのダイナミクス 研究	金谷 利治	京都大学	化学研究所	Study on the dynamic of block polymer having lamella structure	Toshiji Kanaya	Kyoto University
52	シンジオタクチックポリスチレンの包接結晶相内の ゲスト分子のダイナミクス	金子 文俊	大阪大学	理学研究科	Dynamics of Guest Molecules Included in the Clathrate Phase of Syndiotactic Polystyrene	Fumitoshi Kaneko	Osaka University

No.	研究題目	代表者名	所属機関	所属部署	Title	Name	Organization
53	タンパク質の構造エントロピーの評価	城地 保昌	東京大学	分子細胞生物学研究所	Estimation of conformational entropy of protein	Yasumasa Zyouchi	The University of Tokyo
54	水分子の拡散運動から見た気体水和物の生成過程	山室 修	東京大学	物性研究所	Formation Process of Gas Hydrate Observed through Diffusion of Water Molecules	Osamu Yamamuro	The University of Tokyo
55	イオンチャージPMMA/EMITFSIのガラス転移とイオン導電機構	山室 修	東京大学	物性研究所	Glass Transition and Ion-conducting Mechanism of Ion Gel PMMA/EMITFSI	Osamu Yamamuro	The University of Tokyo
56	セルロース誘導体水溶液の熱ゲル化および相分離のダイナミクス	山室 憲子	東京電機大学	理工学部	Dynamics of thermal gelation and phase separation in aqueous solution of cellulose derivatives	Noriko Yamamuro	Tokyo Denki University
57	tert-ブチルアルコール水溶液における水分子の拡散ダイナミクス	三沢 正勝	新潟大学	理学部	Diffusion dynamics of water molecules in tert-Butyl alcohol aqueous solution	Masakatsu Misawa	Niigata University
58	ナノ多孔質体FSMの細孔内水分子のダイナミクスの温度依存性	大友 季哉	高エネルギー加速器研究機構	物質構造科学研究所	Temperature dependence of dynamics of confined water in the nanoporous silica, FSM	Toshiya Ohtomo	High Energy Accelerator Research Organization
59	ナノ空間における2成分液体のダイナミクス	高原 周一	岡山理科大学	理学部	Dynamics of two-component liquid confined in nano-space.	Syuchi Takahara	Okayama University of Science
60	キラレ液晶物質5*CBの等方液体、コレステリック液晶、ガラス、結晶における分子の速い再配向運動	稻葉 章	大阪大学	理学研究科	QENS Studies of Fast Molecular Reorientations in Isotropic, Cholesteric, Glass and Crystalline Phases of 5*CB	Akira Inaba	Osaka University
61	イオン液体bmimBrおよびbmimIの拡散運動と低エネルギー崩起	稻村 泰弘	東京大学	物性研究所	Diffusive motions and Low-energy Excitations of Ionic Liquids bmimBr and bmimI	Yasuhiro Inamura	The University of Tokyo
62	重水の準・非弾性散乱測定による群定数の構築 III	田嶋 誠司	京都大学	工学研究科	Construction of group constant of heavy water by means of inelastic and quasi-elastic neutron scattering III	Seiji Tasaki	Kyoto University
63	寒冷下におけるコンクリート中自由水のダイナミクス観測	森 一広	京都大学	原子炉実験所	Observation of dynamics for free-water within concrete under the cold district	Kazuhiro Mori	Kyoto University
64	低熱ボルトランドセメントの長期水和反応過程の観測	森 一広	京都大学	原子炉実験所	Observation for the long hydration process of low heat Portland cement	Kazuhiro Mori	Kyoto University
65	$\text{Pr}_{2-2x}\text{Ca}_{1+2x}\text{Mn}_2\text{O}_7(x \sim 0.5)$ の磁気構造	篠永 祐介	科学技術振興機構	ERATO十倉スピン起構造プロジェクト	Magnetic structures of $\text{Pr}_{2-2x}\text{Ca}_{1+2x}\text{Mn}_2\text{O}_7(x \sim 0.5)$	Yusuke Tokunaga	Japan Science and Technology Agency
66	かご状物質のフォン・ダイナミクス	李 哲虎	産業技術総合研究所	エネルギー技術研究部門	Phonon dynamics of cage compounds	Chul-Ho LEE	Advanced Industrial Science And Technology
67	$\text{La}_3\text{Pd}_{20}\text{Ge}_6$ のフォン・ダイナミクス	李 哲虎	産業技術総合研究所	エネルギー技術研究部門	Phonon dynamics of $\text{La}_3\text{Pd}_{20}\text{Ge}_6$	Chul-Ho LEE	Advanced Industrial Science And Technology
68	かご状物質のフォン・ダイナミクス	李 哲虎	産業技術総合研究所	エネルギー技術研究部門	Phonon dynamics of cage compounds	Chul-Ho LEE	Advanced Industrial Science And Technology
69	F-アクチンの動的特性の解析	藤原 恒	日本原子力研究開発機構	量子ビーム応用研究部門	Analysis of F-actin dynamics	Satoru Fujiwara	Japan Atomic Energy Agency

No.	研究題目	代表者名	所属機関	所属部局	Title	Name	Organization
70	かご状物質のフォンダイナミックス	李 哲虎	産業技術総合研究所	エネルギー技術研究部門	Phonon dynamics of cage compounds	Chul-Ho LEE	Advanced Industrial Science And Technology
71	LaCoO ₃ 系ペロブスカイト型混合伝導体のin situ構造解析	野村 勝裕	産業技術総合研究所	ユビキタスエネルギー研究部門	In situ structure analysis of LaCoO ₃ -based perovskite-type mixed conductors	Katsuhiro Nomura	Advanced Industrial Science And Technology
72	LaMnO ₃ 系ペロブスカイト型混合伝導性材料のin situ構造解析	野村 勝裕	産業技術総合研究所	ユビキタスエネルギー研究部門	In situ structure analysis of LaMnO ₃ -based perovskite-type mixed conductors	Katsuhiro Nomura	Advanced Industrial Science And Technology
73	BaZnO ₃ 系ペロブスカイト型プロト-伝導体のイオン伝導経路の研究	野村 勝裕	産業技術総合研究所	ユビキタスエネルギー研究部門	Study on proton conduction path of Ba(Zr,Y)O ₃ -based perovskite proton conductors	Katsuhiro Nomura	Advanced Industrial Science And Technology
74	ガス包接化合物における形成及び分解過程のそ	星川 晃範	日本原子力研究開発機構	量子ビーム応用研究部門	In situ neutron diffraction study of formation and decomposition process in clathrate hydrate	Akinori Hoshikawa	Japan Atomic Energy Agency
75	強磁性TiO ₂ の結晶構造	茂筑 高士	物質・材料研究機構	超伝導材料研究センター	Crystal structure of ferrimagnetic TiO ₂	Takashi Mochiku	National Institute for Materials Science
76	充填スクッテルダイト化合物におけるラットリング	金子 耕士	日本原子力研究開発機構	先端基礎研究センター	Rattling in filled-skutterudite compounds	Koji Kaneko	Japan Atomic Energy Agency

平成18年度 共同利用課題一覧(後期) Joint Research List (2006 Latter Term)

嘱託研究員 (Commission Researcher)

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
1	金属吸着銅表面電子状態の研究	有賀 哲也	京都大学	理学研究科	Electronic structure of surface states on metal adsorbed Cu surfaces	Tetsuya Aruga	Kyoto University
2	表面窒化物とマンガン化合物の磁性と構造	柄原 浩	九州大学	総合理工学府	Magnetism and structure of nitrides and manganese compounds at surfaces	Hiroshi Tochihara	Kyushu University
3	金属電極間を架橋した単一分子の伝導および物性計測	木口 学	北海道大学	理学研究院	Measurement of conductance and physical properties of a single molecule bridging between metal electrodes	Manabu Kiguchi	Hokkaido University
4	合成化学的手法による有機分子—基盤接合系の構築	原 賢二	北海道大学	理学研究院	Construction of Organic Molecule-Substrate Linkage by Organic Synthetic Approach	Kenji Hara	Hokkaido University
5	SPMによる単一吸着分子の物性	米田 忠弘	東北大学	多元物質科学研究所	Electronic properties of a single adsorbed molecule by means of SPM	Tadahiro Komeda	Tohoku University
6	シリコン表面に化学結合した共役系分子の電気伝導	村田 英幸	北陸先端科学技術大学院大学		Electric conduction of π -conjugated molecules directly attached to silicon surface	Hideyuki Murata	Japan Advanced Institute of Science and Technology
7	分子-電極接合の界面制御技術の開発	谷口 正輝	大阪大学	産業科学研究所	Development of method to control the interface between molecules and electrodes	Masateru Taniguchi	Osaka University
8	表面振動分光をもちいた表面反応素過程の研究	松本 吉泰	自然科学研究機構	分子科学研究所	Elementary chemical reaction processes at surfaces by means of surface vibrational spectroscopy	Yoshiyasu Matsumoto	National Institutes of Natural Sciences
9	ナノ構造の原子構造と電子状態	大門 寛	奈良先端科学技術大学院大学		Atomic structure and electronic states of nano-size materials	Hiroshi Daimon	Nara Institute of Science and Technology
10	"	笠井 秀明	大阪大学	工学研究科	"	Hideaki Kasai	Osaka University
11	高圧下の比熱測定装置の開発	高柳 滋	北海道教育大学	教育学部	Development of apparatus for specific heat measurements under high pressure	Shigeru Takayanagi	Hokkaido University of Education
12	中性子回析に用いる圧力装置の開発	片野 進	埼玉大学	理工学研究科	Developments of High Pressure Cell for Neutron Diffraction	Susumu Katano	Saitama University
13	高压下の比熱測定装置の開発	梅原 出	横浜国立大学	工学研究院	Development of apparatus for specific heat measurements under high pressure	Izuru Umehara	Yokohama National University
14	圧力下NMR測定法に関する開発	藤原 直樹	京都大学	人間環境学研究科	Development of NMR measurement method under high pressure	Naoki Fujiiwara	Kyoto University
15	チャコール式 ^3He 冷凍機の装置の開発	稻田 佳彦	岡山大学	教育学部	Development of a charcoal type ^3He refrigerator	Yoshihiko Inada	Okayama University

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
16	Fe ₂ Pにおける圧力下電気抵抗測定	礒田 誠	香川大学	教育学部	Effect of Pressure on the Electrical Resistivity of Fe ₂ P	Makoto Isoda	Kagawa University
17	Ce ₂ Pd ₃ Siの単結晶試料評価とその圧力効果	藤原 哲也	山口大学	理工学研究科	Effect of Pressure on the Ce ₂ Pd ₃ Si Single Crystal	Tetsuya Fujiwara	Yamaguchi University
18	低温用マルチアンビル装置の開発	辺土 正人	琉球大学	理学部	Development of multi-anvil apparatus for low temperature	Masato Hedo	University of Ryukyus
19	有機伝導体の圧力効果	村田 恵三	大阪市立大学	理学研究科	Effect of pressure on the organic conductor	Keizo Murata	Osaka City University
20	多重極限開連装置の調整	高橋 博樹	日本大学	文理学部	Adjustment of Cubic Anvil apparatus	Hiroki Takahashi	Nihon University
21	極端紫外レーザーの研究	富堅 格	理化研究所	播磨研究所	Study of extreme ultra violet laser	Tadashi Togashi	The Institute of Physical and Chemical Research
22	YBCOフィルムの光電子分光	岡崎 浩三	名古屋大学	理学研究科	Photoemission study on YBCO film	Kozo Okazaki	Nagoya University
23	有機化合物の光電子分光	金井 要	名古屋大学	理学研究科	Photoemission study on organic compounds	Kaname Kanai	Nagoya University
24	Bi系超伝導体の角度分解光電子分光	竹内 恒博	名古屋大学	エコトピア科学研究所	Angle-resolved photoemission study on high Tc cuprate	Tsunehiro Takeuchi	Nagoya University
25	固体の発光実験	河合 潤	京都大学	工学研究科	Soft-x-ray emission spectroscopy on solids	Jun Kawai	Kyoto University
26	高分解能光電子分光による強相関物質の研究	横谷 尚睦	岡山大学	自然科学研究科	Ultra-high resolution study on strongly correlated materials	Takayoshi Yokoya	Okayama University
27	レーザーおよび放射光の同時照射の研究	鎌田 雅夫	佐賀大学	シンクロトロン光応用研究センター	Coincidence spectroscopy between laser and synchrotron radiation	Masao Kamada	Saga University
28	準結晶の高分解能光電子分光	田村 隆治	東京理科大学	基礎工学部	High-resolution photoemission study on quasi crystals	Ryuji Tamura	Tokyo University of Science
29	共鳴逆光電子分光装置の開発	樋口 透	東京理科大学	理学部	Development of resonant inverse photoemission spectroscopy	Tohru Higuchi	Tokyo University of Science
30	光電子分光法を用いた各種分子性結晶の電子状態の研究及び装置の低温化	木須 孝幸	理化研究所	中央研究所	Research on electron state of molecular crystals using photoemission spectroscopy	Takayuki Kisu	The Institute of Physical and Chemical Research
31	強相関系物質の共鳴逆光電子分光の研究	木村 真一	自然科学研究機構	分子科学研究所	Resonant inverse photoemission study on strongly correlated materials	Shinichi Kinura	National Institutes of Natural Sciences
32	酸化バナジウムの高分解能光電子分光	江口 律子	理化研究所	播磨研究所	Photoemission study on vanadium oxides	Ritsuko Eguchi	The Institute of Physical and Chemical Research

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33	4f電子系物質の高分解能光電子分光	松波 雅治	理化学研究所	播磨研究所	Photoemission study on 4f materials	Masaharu Matsunami	The Institute of Physical and Chemical Research
34	X線非弾性散乱の研究	石井 啓文	Synchrotron Radiation Research		X-ray inelastic scattering spectroscopy on solids	Hirofumi Ishii	Synchrotron Radiation Research Center
35	希土類金属化合物の非占有電子状態解析	手塚 泰久	弘前大学	理工学部	Study of un-occupied electronic states of lanthanide compounds	Yasuhsia Tezuka	Hirosaki University
36	高分解能光電子分光による電子状態の研究	高橋 隆	東北大学	理学研究科	Study of Electronic structures by high-resolution PES	Takashi Takahashi	Tohoku University
37	高輝度極紫外ビームラインの設計・評価	柳原 美広	東北大学	多元物質科学研究所	Design and characterization of brilliance VUV beamline	Mihiro Yanagihara	Tohoku University
38	高輝度放射光を利用する有機薄膜光電子分光ビームラインの設計	上野 信雄	千葉大学	工学部	Design of photoemission spectroscopy beamline for organic materials	Nobuo Ueno	Chiba University
39	二次元表示型スピinn分解光電子エネルギー分析器の開発	大門 寛	奈良先端科学技術大学院大学		Development of 2D display type spin resolved photoelectron energy analyzer	Hiroshi Daimon	Nara Institute of Science and Technology
40	高輝度放射光を用いた固体分光実験設備の基本設計	菅 滋正	大阪大学	基礎工学研究科	Study for basic design of solid state spectroscopy experiment using high brilliance synchrotron radiation	Shigemasa Suga	Osaka University
41	レーザーと放射光を組み合わせた分光研究	鎌田 雅夫	佐賀大学	シクロトロン光応用研究センター	Combined spectroscopic study of laser and SR	Masao Kamada	Saga University
42	コヒーレント放射光を用いた分光研究	宮原 恒豊	首都大学東京	都市教養学部	Spectroscopic study coherent synchrotron radiation	Tsuneki Miyahara	Tokyo Metropolitan University
43	高輝度放射光を用いた固体分光実験設備の基本設計	佐藤 繁	東北工業大学		Design study of experimental station for solid state spectroscopy using high brilliance synchrotron radiation	Shigeru Sato	Tohoku Institute of Technology
44	高輝度軟X線ビームラインの設計・評価	太田 優明	立命館大学	総合理工学研究機構SRセンター	Design and characterization of high brilliance SX beamline	Toshiaki Ohta	Ritsumeikan University
45	高輝度放射光の光源設計及び加速器の開発研究	神谷 幸秀	高エネルギー加速器研究機構	加速器研究施設	Design and research of accelerators for the high-brilliance light source	Yukihide Kamiya	High Energy Accelerator Research Organization
46	高輝度放射光を利用する原子分光実験設備の基本設計	柳下 明	高エネルギー加速器研究機構	物質構造科学研究所	Design study of experimental station for atomic spectroscopy using high brilliance synchrotron radiation	Akira Yagishita	High Energy Accelerator Research Organization
47	高輝度光源計画における直入射ビームラインおよびその利用計画の検討	伊藤 健二	高エネルギー加速器研究機構	物質構造科学研究所	Design and case study for the high-resolution-atoms and molecules-spectroscopy beamline at the Super SOR	Kenji Ito	High Energy Accelerator Research Organization
48	高輝度極紫外ビームラインの設計・評価	小野 寛太	高エネルギー加速器研究機構	物質構造科学研究所	Design and characterization of brilliance VUV beamline	Kanta Ono	High Energy Accelerator Research Organization
49	高輝度放射光における表面化学生研究用コインシングルス分光ビームラインの設計	間瀬 一彦	高エネルギー加速器研究機構	物質構造科学研究所	Design coincidence spectroscopy for surface chemistry beam line	Kazuhiko Mase	High Energy Accelerator Research Organization

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
50 本設計	高輝度放射光を利用する分子分光実験設備の基	小杉 信博	自然科学研究機構 分子科学研究所	分子科学研究 所	Design of molecular spectroscopy experimental station	Nobuhiro Kosugi	National Institutes of Natural Sciences
51 高輝度極紫外ビームラインの設計・評価	木村 真一	自然科学研究 機構	分子科学研究所	分子科学研究 所	Design and characterization of brilliance VUV beamline	Shinichi Kimura	National Institutes of Natural Sciences
52 高輝度軟X線ビームラインの設計・評価	石川 哲也	理化研究所	播磨研究所	播磨研究所	Design and characterization of high brilliance SX beamline	Tetsuya Ishikawa	The Institute of Physical and Chemical Research
53 高輝度光源ビームラインにおける分光光学系の 設計・開発	大橋 治彦	高輝度光科学 研究センター			Design of the new undulator beamline at Spring-8	Haruhiko Ohashi	Japan Synchrotron Radiation Research Institute
54 光電子顕微鏡による磁性ナノ構造物質の磁化過 程	木下 豊彦	高輝度光科学 研究センター			Magnetization in process of magnetic nano structure by PEEM	Toyohiko Kinoshita	Japan Synchrotron Radiation Research Institute
55 電磁石及び高周波加速システムの開発研究	小関 忠	高エネルギー 加速器研究機構 速器研究施設	高エネルギー 加速器研究施設	高エネルギー 加速器研究施設	Research of magnet and RF systems for high-brilliance light sources	Tadashi Koseki	High Energy Accelerator Research Organization
56 入射線型加速器の研究	設楽 哲夫	高エネルギー 加速器研究機構 速器研究施設	高エネルギー 加速器研究施設	高エネルギー 加速器研究施設	Research of linear accelerator for high-brilliance light sources	Tetsuo Shidara	High Energy Accelerator Research Organization
57 高輝度電子錐の研究	栗木 雅夫	高エネルギー 加速器研究機構 速器研究施設	高エネルギー 加速器研究施設	高エネルギー 加速器研究施設	Research of High-brilliance Electron Gun	Masao Kuruki	High Energy Accelerator Research Organization
58 線型加速器のビーム制御に関する研究	佐藤 政則	高エネルギー 加速器研究機構 速器研究施設	高エネルギー 加速器研究施設	高エネルギー 加速器研究施設	Study of beam control in linear accelerators	Masanori Sato	High Energy Accelerator Research Organization
59 高周波加速空洞の開発研究	伊澤 正陽	高エネルギー 加速器研究機構 速器研究施設	高エネルギー 加速器研究施設	高エネルギー 加速器研究施設	Development of RF accelerating cavity for high-brilliance light sources	Masahiro Izawa	High Energy Accelerator Research Organization
60 超高真空システムの開発研究	本田 融	高エネルギー 加速器研究機構 速器研究施設	高エネルギー 加速器研究施設	高エネルギー 加速器研究施設	Research of ultra-high vacuum system in high-brilliance light sources	Toru Honda	High Energy Accelerator Research Organization
61挿入光源の研究	山本 樹	高エネルギー 加速器研究機構 速器研究施設	高エネルギー 加速器研究施設	高エネルギー 加速器研究施設	Study of insertion devices in high-brilliance light sources	Shigeru Yamamoto	High Energy Accelerator Research Organization
62 超伝導加速空洞の開発研究	梅森 健成	高エネルギー 加速器研究機構 速器研究施設	高エネルギー 加速器研究施設	高エネルギー 加速器研究施設	Study of insertion devices in high-brilliance light sources	Kensei Umemori	High Energy Accelerator Research Organization
63 放射光源の制御及びモニタリングシステムの開発研究	帯名 崇	物質構造科学 研究所	物質構造科学 研究所	物質構造科学 研究所	Research and Development of Control and Monitor System of Synchrotron Radiation Sources	Takashi Obina	High Energy Accelerator Research Organization
64挿入光源磁場のビームへの影響に関する研究	原田 健太郎	高エネルギー 加速器研究機構 速器研究施設	高エネルギー 加速器研究施設	高エネルギー 加速器研究施設	Study of effects of insertion-device fields on electron beam in a high-brilliance light source	Kentaro Harada	High Energy Accelerator Research Organization
65 中性子散乱装置のアップグレード後の研究計画 の実施と共同利用の推進	岩佐 和晃	東北大	理学研究科	理学研究科	Upgrade of neutron scattering instruments and promotion of the ISSP user program at JRR-3	Kazuaki Iwata	Tohoku University
66	"	東北大	金屬材料研究 所	金屬材料研究 所	"	Kenji Ohyama	Tohoku University

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
67	中性子散乱装置のアップグレード後の研究計画の実施と共同利用の推進	平賀 晴弘	東北大学	金属材料研究所	Upgrade of neutron scattering instruments and promotion of the ISSP user program at JRR-3	Haruhiro Hiraka	Tohoku University
68	"	野田 幸男	東北大学	多元物質科学研究所	"	Yukio Noda	Tohoku University
69	"	日野 正裕	京都大学	原子炉実験所	"	Masahiro Hino	Kyoto University
70	"	河原崎 修三	大阪大学	理学研究科	"	Syuzo Kawarasaki	Osaka University
71	"	日高 昌則	九州大学	理学研究院	"	Masanori Hidaka	Kyushu University
72	"	大竹 淑恵	理化研究所	和光研究所	"	Yoshie Otake	The Institute of Physical and Chemical Research
73	中性子極小角散乱実験装置のアップグレード	金子 純一	北海道大学	工学研究科	Upgrade of the ultra-small angle diffractometer	Junichi Kaneko	Hokkaido University
74	"	古坂 道弘	北海道大学	工学研究科	"	Michihiro Furusaka	Hokkaido University
75	中性子散乱用高压セルの開発および高压下における中性子散乱実験	藤原 哲也	山口大学	理工学研究科	Neutron Scattering Experiments under High Pressure and Development of High Pressure Cell for Neutron Scattering	Tetsuya Fujiwara	Yamaguchi University
76	超強磁場下における半導体短周期超格子の遠赤外磁気光学効果に関する研究	百瀬 英毅	大阪大学	低温センター	Far-infrared magnetooptics in short period semiconductor superlattices under Mega-Gauss magnetic fields	Hideki Monose	Osaka University
77	単層カーボナノチューブの超強磁場下遠赤外特性の研究	横井 裕之	熊本大学	自然科学研究科	Far-infrared optical study of single-walled carbon nanotubes under ultra-high magnetic fields	Hiroyuki Yokoi	Kumamoto University
78	半導体中の電子・正孔複合体と強磁場効果	梅原 雅捷	前物質・材料研究機構		Complexes of electrons and holes in semiconductors under high magnetic fields	Masakatu Umehara	(Former) National Institute for Materials Science
79	シリコン表面における单層有機分子膜の作製と電子物性評価	山下 良之	物質・材料研究機構		Fabrication of organic monolayer on Si surfaces and investigation of electronic properties	Yoshiyuki Yamashita	National Institute for Materials Science

一般研究員 (General Researcher)

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
1	スクラムダイト化合物Gd _T P ₁₂ (T=Fe, Ru, Os)の高压合成	城谷 一民	室蘭工業大学	工学部	High-pressure synthesis of filled skutterudites Gd _T P ₁₂ (T=Fe, Ru and Os)	Ichimin Shirotani	Muroran Institute of Technology
2	"	安藤 弘敏	室蘭工業大学	工学研究科	"	Hirotoshi Andou	Muroran Institute of Technology

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
3	高温超臨界流体を利用した高温高圧下での新物質創製と結晶成長技術の開発	長谷川 正	東北大	金属材料研究所	Synthesis of new materials and development of technique for crystal growth using super-critical-fluid in high temperature and high pressure condition	Masashi Hasegawa	Tohoku University
4	水素ハイドレートの水素分子内振動の圧力変化	平井 寿子	筑波大学	生命環境科学研究所	Vibration modes of hydrogen molecules of hydrogen hydrates	Hisako Hirai	University of Tsukuba
5	"	町田 真一	筑波大学	生命環境科学研究所	"	Shin-ichi Machida	University of Tsukuba
6	"	小長井 敬介	筑波大学	生命環境科学研究所	"	Keisuke Konagai	University of Tsukuba
7	超高压下における半導体ペッキCu材料の挙動に関する調査研究	大場 隆之	東京大学	産学連携本部	Characteristics and Behaviors of Electrochemical-plated-Cu under Ultra High Pressure	Takayuki Ohba	The University of Tokyo
8	四ヨウ化錫の高压液体一液体相転移測定技術の開発	浜谷 望	お茶の水女子大学	人間文化研究科	Development of measurement technique of high-pressure liquid-liquid phase transition in Sn_4	Nozomu Hamaya	Ochanomizu University
9	高压下における希ガス溶解度	宮川 千絵	大阪大学	理学研究科	Noble gas solubility under high pressure	Chie Miyakawa	Osaka University
10	ペロブスカイト型構造を持つユバベルト酸化物の高压合成法を用いた新物質探索	赤星 大介	上智大学	理工学部	New material design of cobalt oxides with perovskite-type structure by high-pressure synthesis	Daisuke Akahoshi	Sophia University
11	三角格子磁性誘電体のNMR	大濱 哲夫	千葉大学	自然科学研究科	NMR in triangular-lattice magnetic ferroelectrics	Tetsuo Ohama	Chiba University
12	"	伊藤 大輔	千葉大学	自然科学研究科	"	Daisuke Itoh	Chiba University
13	擬一次元磁性体TiOBrの逐次相転移とスピinn状態の核磁気共鳴・核四重極共鳴による研究	菊地 淳	明治大学	理工学部	NMR and NQR studies of successive phase transitions and spin states in quasi-one-dimensional TiOBr	Jun Kikuchi	Meiji University
14	2次元有機無機ペロブスカイト化合物の磁性	本多 善太郎	埼玉大学	理工学研究科	Magnetic properties of two dimensional organic-inorganic perovskite compounds	Zentaro Honda	Saitama University
15	幾何学的にフラストレートした三角格子磁性体の低温磁化測定	前野 悅輝	京都大学	理学研究科	Low temperature magnetization measurement of a geometrically frustrated triangular antiferromagnet	Yoshiteru Maeno	Kyoto University
16	"	南部 雄亮	京都大学	理学研究科	"	Yusuke Nambu	Kyoto University
17	"	小沼 圭介	京都大学	理学研究科	"	Keisuke Onuma	Kyoto University
18	幾何学的にフラストレートした金属磁性体 $\text{Pr}_2\text{Ir}_2\text{O}_7$ における磁気秩序	町田 洋	京都大学	理学研究科	Magnetic Order in the frustrated itinerant magnet $\text{Pr}_2\text{Ir}_2\text{O}_7$	Yo Machida	Kyoto University
19	新しいYb層状ホウ化物の低温磁化測定	前野 悅輝	京都大学	理学研究科	Low temperature magnetization measurement of a new Yb based layered boride	Yoshiteru Maeno	Kyoto University

No.	研究題目	氏名	所属機関	所属部署	Title	Name	Organization
20	新しいYb層状ホウ化物の低温磁化測定	久我 健太郎	京都大学	理学研究科	Low temperature magnetization measurement of a new Yb based layered boride	Kentaro Kuga	Kyoto University
21	第2種超伝導体の混合状態の研究	町田 一成	岡山大学	自然科学研究科	Studies on mixed state in type II superconductors	Kazushige Machida	Okayama University
22	Prを含むパラクロア型酸化物の磁気プラストレー シヨンの研究	松平 和之	九州工業大学	工学部	A study on the magnetic frustration of Pr-based pyrochlore oxides	Kazuyuki Matsuhira	Kyushu Institute of Technology
23	擬1次元DMEI塩の電子状態の分光学的研究	伊東 裕	名古屋大学	工学研究科	Spectroscopic study on the electronic state of quasi-one-dimensional conductors	Hiroshi Ito	Nagoya University
24	1次元分子性伝導体における磁気秩序と電荷秩序の相関効果	花咲 徳亮	岡山大学	自然科学研究科	Cross correlation between the magnetic and the charge order in the one-dimensional molecular conductor	Noriaki Hanasaki	Okayama University
25	有機薄膜の低温物性測定(Ⅷ)	鳥塚 潔	神奈川工科大學		Measurements of low temperature properties of organic thin films (VIII)	Kiyoshi Torizuka	Kanagawa Institute of Technology
26	有機スピントリニクスを目指したナノ単結晶デバイ スの作製と評価	長谷川裕之	情報通信研究機構	未来ICT研究センター	Fabrication and estimation of nanocrystalline devices for organic spintronics	Hiroyuki Hasegawa	National Institute of Information and Communications
27	C ₆₀ アニオノラジカル塩単結晶の磁気特性	森山 広思	東邦大学	理学部	Magnetic Properties of Single-Crystal C ₆₀ Anion Radical Salts	Hiroshi Moriyama	Toho University
28	"	杉浦 崇仁	東邦大学	理学研究科	"	Takahito Sugura	Toho University
29	フェロセン系電荷移動錯体の合成と物性評価	持田 智行	東邦大学	理学部	Synthesis and properties of ferrocene-based charge-transfer complexes	Tomoyuki Mochida	Toho University
30	"	赤坂 隆拓	東邦大学	理学研究科	"	Takahiro Akasaka	Toho University
31	分子結晶の磁性と構造	菅野 忠	明治学院大学	法学部	Magnetism and structures of molecular crystals	Tadashi Sugano	Meiji Gakuin University
32	低次元磁性体の熱力学・動力学	山本 昌司	北海道大学	理学研究院	Thermodynamics and quantum dynamics of low-dimensional magnets	Shoji Yamamoto	Hokkaido University
33	低次元磁性体の統計力学	坂井 徹	日本原子力研究所開発機構	量子ビーム応用研究部門	Statistical Mechanics of Low-Dimensional Magnets	Toru Sakai	Japan Atomic Energy Agency
34	グラフエンににおける量子ホール効果と超対称の役割について	長谷部 一氣	茨城電波工業高等専門学校		Quantum Hall effect in Graphene and its relation to Supersymmetry	Kazuki Hasebe	Takuma National College of Technology
35	低速陽電子ビーム法による金属表面吸着水素の研究	金沢 育三	東京学芸大学	教育学部	Study of adsorbed hydrogens on metallic surface by slow positron beam	Ikuko Kanazawa	Tokyo Gakugei University
36	"	広田 幸二	東京学芸大学	教育学研究科	"	Koji Hirota	Tokyo Gakugei University

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37	結晶表面の原子配列制御	川村 隆明	山梨大学	教育人間科学 教育部	Control of atomic arrangement on a crystal surface	Takaaki Kawamura	University of Yamanashi
38	Ge(001)表面および Sn吸着Ge(001)表面の電子状態の第一原理計算	石井 晃	鳥取大学	工学部	First-principle's calculation for electronic structure of Ge(001) and Sn adsorbed Ge(001) surface	Akira Istii	Tottori University
39	Si(001)表面上へのNa吸着による(4×1)及び(2×1)構造のSTM観察	柄原 浩	九州大学	総合理工学研究院	STM observation of (4×1) and (2×1) structures formed on Si(001) by Na adsorption	Hiroshi Tsuchihara	Kyushu University
40	"	白澤 徹郎	九州大学	総合理工学研究院	"	Tetsuroh Shirasawa	Kyushu University
41	ナノ磁性体の応用研究	河村 紀一	日本放送協会	放送技術研究所	Fabrication of magnetic nano structures and its applications	Norikazu Kawamura	NHK Science and Technical Research Laboratories
42	Ag(100)表面上に作成したTi酸化物薄膜の構造解析	枝元 一之	立教大学	理学部	Structural analysis of Ti oxide layers formed on Ag(100)	Kazuyuki Edamoto	Rikkyo University
43	"	金子 誉	立教大学	理学研究科	"	Homare Kaneko	Rikkyo University
44	ナノ構造の電気伝統測定のための金探針カンチレバーを用いたAFMシグラフィー手法の開発	秋山 琴音	東北大学	金属材料研究所	Development of nano lithography with a metal-tip cantilever using non-contact AFM for electrical conduction measurement of nanostructure	Kotone Akiyama	Tohoku University
45	半導体表面近傍に存在するドーナット原子のKFM観察	酒井 明	京都大学	国際融合創造センター	KFM observation of subsurface dopant atoms on semiconductor surface	Akira Sakai	Kyoto University
46	"	小林 賢吾	京都大学	工学研究科	"	Kengo Kobayashi	Kyoto University
47	"	宮脇 悠	京都大学	工学研究科	"	Yuu Miyawaki	Kyoto University
48	放射光分光を用いた遷移金属酸化物へテロ界面電子状態の研究	組頭 広志	東京大学	工学系研究科	Synchrotron analysis of the electronic structures of heterointerface based on transition metal oxides	Hiroshi Kumagashira	The University of Tokyo
49	積層型抵抗変化不揮発性メモリーの作製	大久保 勇男	東京大学	工学系研究科	Development of resistance random access memory with layered structure	Isoo Ohkubo	The University of Tokyo
50	"	原田 尚之	東京大学	工学系研究科	"	Takayuki Harada	The University of Tokyo
51	同軸型直衝交イオン散乱分光法による金属ガラス薄膜の相転移測定	松本 祐司	東京工業大学	応用セラミックス研究所	Observation of phase transition in metallic glass thin film by CAICISS	Yuji Matsumoto	Tokyo Institute of Technology
52	薄膜合成と新規酸化物発見のためのソフトウェアツールの開発	目黒 伸也	物質・材料研究機構	半導体材料センター	Development of software tools for thin film synthesis and discovery of new oxide	Shinya Meguro	National Institute for Materials Science
53	低温下における金属中の水素の量子効果	原田 修治	新潟大学	工学部	Quantum effects of hydrogen in metals under low temperature	Shuji Harada	Niigata University

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54	低温下における金属中の水素の量子効果	荒木 秀明	長岡工業高等専門学校		Quantum effects of hydrogen in metals under low temperature	Hideaki Araki	Nagaoka National College of Technology
55	回転超流動ヘリウム3の量子流体力学的研究	佐々木 豊	京都大学	低温物質科学研究センター	Research on Quantum Fluid Dynamics on Rotating Superfluid Helium 3	Yutaka Sasaki	Kyoto University
56	細い円筒容器内超流動ヘリウム3の量子流体力学の研究	石川 修六	大阪市立大学	理学研究科	Study on quantum fluid dynamics of superfluid He-3 in a narrow cylinder	Osamu Ishikawa	Osaka City University
57	"	石黒 充輔	大阪市立大学	理学研究科	"	Ryousuke Ishigro	Osaka City University
58	固体ヘリウム4の超流動現象	白濱 圭也	慶應義塾大学	理工学部	Superfluidity in solid helium 4	Keiya Shirahama	Keio University
59	キュービックアンビルプレスを用いたBEDSe-TTF系有機伝導体の研究	谷口 弘三	埼玉大学	理工学研究科	Study of BEDSe-TTF-based organic conductors using cubic anvil press	Hironi Taniguchi	Saitama University
60	"	片山 和弘	埼玉大学	理工学研究科	"	Kazuhiro Katayama	Saitama University
61	希土類金属間化合物の単結晶育成	小坂 昌史	埼玉大学	理工学研究科	Single-crystal growth of rare-earth intermetallic compounds	Masashi Kosaka	Saitama University
62	"	加藤 慶頭	埼玉大学	理工学研究科	"	Yoshiaki Kato	Saitama University
63	"	能渡 広美	埼玉大学	理工学研究科	"	Hironi Nowatari	Saitama University
64	超高压下におけるYb化合物の価数からぎに関する研究	小坂 昌史	埼玉大学	理工学研究科	Study of valence fluctuation on Yb compounds using a miniature diamond anvil cell	Masashi Kosaka	Saitama University
65	"	山田 篤	埼玉大学	理工学研究科	"	Atsushi Yamada	Saitama University
66	Yb化合物への圧力効果	才賀 裕太	埼玉大学	理工学研究科	Pressure effect on Yb compounds	Yuta Saiga	Saitama University
67	キュービックアンビルを用いた比熱測定法の開発	梅原 出	横浜国立大学	工学研究院	The development of the heat capacity measurement system with cubic anvil	Izuru Umehara	Yokohama National University
68	"	富岡 史明	横浜国立大学	工学府	"	Fumiaki Tomioka	Yokohama National University
69	"	小川 敏寛	横浜国立大学	工学府	"	Toshihiro Ogawa	Yokohama National University
70	反軸対称性のないセリウム化合物の量子臨界点付近の物性	中島 美帆	信州大学	理学部	Physical properties around the magnetic quantum critical point in Cerium compounds without inversion symmetry	Miho Nakashima	Shinshu University

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71	反転対称性のないセリウム化合物の量子臨界点付近の物性	水谷 真治	信州大学	工学系研究科	Physical properties around the amgnetic quantum critical point in Cerium compounds without inversion symmetry	Shinji Mizutani	Shinshu University
72	新しいYb層状ボウ化物の圧力下の抵抗測定	前野 悅輝	京都大学	理学研究科	Resistivity measurement under pressure for a new layered Yb based boride	Yoshiteru Maeno	Kyoto University
73	"	町田 洋	京都大学	理学研究科	"	Yo Machida	Kyoto University
74	"	久我 健太郎	京都大学	理学研究科	"	Kentaro Kuga	Kyoto University
75	CePt ₂ Ge ₂ の電子状態の圧力効果	摂持 力生	大阪大学	理学研究科	High-pressure effects on the electronic state in CePt ₂ Ge ₂	Rikio Settai	Osaka University
76	"	河井 友也	大阪大学	理学研究科	"	Tomoya kawai	Osaka University
77	HoCu ₂ Si ₂ の磁気転移の圧力効果	繁岡 透	山口大学	理工学研究科	Pressure effect of magnetic transitions on HoCu ₂ Si ₂	Toru Shigeoka	Yamaguchi University
78	"	田中 満	山口大学	理工学研究科	"	Mitsuru Tanaka	Yamaguchi University
79	PrRh ₂ Ge ₂ の単結晶の磁気転移	繁岡 透	山口大学	理工学研究科	Magnetic transitions on a PrRh ₂ Ge ₂ single crystal	Toru Shigeoka	Yamaguchi University
80	"	麻生 由紀	山口大学	理工学研究科	"	Yuki Asou	Yamaguchi University
81	Eu化合物の圧力誘起価数転移に関する研究	藤原 哲也	山口大学	理工学研究科	Study for pressure induced Eu valence transitions in some Eu compounds	Tetsuya Fujiwara	Yamaguchi University
82	"	金沢 紗子	山口大学	理工学研究科	"	Ayako Kanazawa	Yamaguchi University
83	量子臨界点近傍でのRFe ₂ Ge ₂ (R=Y, Lu)におけるFeの局在磁気モーメント形成機構解明	藤原 哲也	山口大学	理工学研究科	Origin of iron local moment formation in RFe ₂ Ge ₂ (R=Y and Lu) near a quantum critical point	Tetsuya Fujiwara	Yamaguchi University
84	"	大石 真也	山口大学	理工学研究科	"	Shinya Oishi	Yamaguchi University
85	アニオニン性NMX-Chain錯体における高圧力下電気伝導度測定	北川 宏	九州大学	理学研究院	Electrical Conductivity of Anionic NMX-Chain Complexes under High Pressure	Hiroshi Kitagawa	Kyushu University
86	"	小林 厚志	九州大学	理学研究院	"	Atsushi Kobayashi	Kyushu University
87	"	山田 鉄兵	九州大学	理学研究院	"	Teppi Yamada	Kyushu University

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88	アニオン性NMX-Chain錯体における高圧力下電気伝導度測定	大坪 主弥	九州大学 理学府	理学部	Electrical Conductivity of Anionic MMX-Chain Complexes under High Pressure	Kazuya Otsubo	Kyushu University
89	ホイスラー型合金Ru _{2-x} Fe _x CrSiの圧力効果	廣井 政彦	鹿児島大学 理学部	理学部	Effects of pressure on the properties of the Heusler alloys Ru _{2-x} Fe _x CrSi	Masaiko Hiroi	Kagoshima University
90	"	六角 錠美	鹿児島大学 理工学研究科	理工学研究科	"	Tsugumi Rokkaku	Kagoshima University
91	スピネル化合物の高圧力中における物性研究	矢ヶ崎 克馬	琉球大学 理学部	理学部	Physical properties of Spinel compounds under high pressure	Katsuma Yagasaki	University of the Ryukyus
92	"	仲村 大	琉球大学 理工学研究科	理工学研究科	"	Dai Nakamura	University of the Ryukyus
93	希土類-コバルト化合物の輸送特性に及ぼす圧力効果の研究	仲間 隆男	琉球大学 理学部	理学部	Pressure effect on transport properties of rare earth-Cobalt compounds	Takao Nakama	University of the Ryukyus
94	"	高江洲 義尚	琉球大学 理工学研究科	理工学研究科	"	Yoshinao Takaesu	University of the Ryukyus
95	"	高良 江里子	琉球大学 理工学研究科	理工学研究科	"	Eriko Takara	University of the Ryukyus
96	静水圧8GPaを超える超高压下の有機伝導体の物性	村田 恵三	大阪市立大学 理学研究科	理学研究科	Electronic Properties of Organic Conductors under Hydrostatic Pressure Exceeding 8 GPa	Keizo Murata	Osaka City University
97	"	Arumugam Sonachalam	大阪市立大学 理学研究科	理学研究科	"	Arumugam Sonachalam	Osaka City University
98	"	藤本 勉	大阪市立大学 理学研究科	理学研究科	"	Tsutomu Fujimoto	Osaka City University
99	"	有本 太郎	大阪市立大学 理学研究科	理学研究科	"	Taro Arimoto	Osaka City University
100	新強磁性形状記憶合金Ni-Mn-X (X=In, Sn)のマルテンサイト及び磁気変態温度の圧力効果	鹿又 武	東北学院大学 工学部	工学部	Pressure effect on the martensitic and magnetic transformation temperatures of new ferromagnetic shape memory alloys Ni-Mn-X (X=In, Sn)	Takeshi Kanomata	Tohoku Gakuen University
101	"	安田 泰士	東北学院大学 工学研究科	工学研究科	"	Taishi Yasuda	Tohoku Gakuen University
102	競合した秩序を示すIr酸化物に対する高圧力下における輸送現象測定	中野 智仁	早稲田大学 理工学部	理工学部	Transport measurements of Ir oxide under high pressure	Tomohito Nakano	Waseda University
103	導電性ラングミニア・プロジェクト膜の高压下の電気的性質	三浦 康弘	桐蔭横浜大学 工学研究科	工学研究科	Electrical Properties of Conductive Langmuir-Blodgett Films under High Pressure	Yasuhiro Miura	Toin University of Yokohama
104	"	松井 春樹	桐蔭横浜大学 工学研究科	工学研究科	"	Haruki Matsui	Toin University of Yokohama

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105 圧力効果Ⅱ	ウランカルコゲナイ化合物における電子状態の 圧力効果	池田 修悟	日本原子力研 究開発機構	先端基礎研究セ ンター	The high-pressure effect of an electronic state in uranium chalcogenide compounds. II	Shugo Ikeda	Japan Atomic Energy Agency
106	"	松田 達磨	日本原子力研 究開発機構	先端基礎研究セ ンター	"	Tatsuma Matsuda	Japan Atomic Energy Agency
107	"	芳賀 芳範	日本原子力研 究開発機構	先端基礎研究セ ンター	"	Yoshinori Haga	Japan Atomic Energy Agency
108 電気抵抗測定	特異な圧力効果を示す分子性導体の超高压下 希土類元素をドープしたBaPrO ₃ のプロトナー電子	石井 康之	理化学研究所	中央研究所	High pressure investigation of the multi component organic conductors	Yasuyuki Ishii	The Institute of Physical and Chemical Research
109 混合導電性の評価	希土類元素をドープしたBaPrO ₃ のプロトナー電子	山口 周	東京大学	工学系研究科	Hole-Proton mixed conductivity in Lanthanoid-doped BaPrO ₃	Shu Yamaguchi	The University of Tokyo
110	"	三室 伸	東京大学	工学系研究科	"	Shin Mimuro	The University of Tokyo
111 窒素をδドープしたGaAsにおける等電子トラップ からの発光	窒素をδドープしたGaAsにおける等電子トラップ	矢口 裕之	埼玉大学	理工学研究科	Luminescence from isoelectronic traps in nitrogen δ-doped GaAs	Hiroyuki Yaguchi	Saitama University
112	"	遠藤 雄太	埼玉大学	理工学研究科	"	Yuta Endo	Saitama University
113 GaAs(110)結晶成長の第一原理計算と動的モン テカルロミュレーション	GaAs(110)結晶成長の第一原理計算と動的モン テカルロミュレーション	石井 晃	鳥取大学	工学部	First-principle's calculation and kinetic Monte Carlo simulation for the epitaxial growth of GaAs(110)	Akira Ishii	Tottori University
114 MBE成長した窒素化合物半導体へテロ・ナノ構造 の光学特性の評価	MBE成長した窒素化合物半導体へテロ・ナノ構造 の光学特性の評価	小柴 後	香川大学	工学部	Optical Characterizations of MBE grown Nitride Composite Semiconductor Hetero Nano Structures	Shyu Koshiba	Kagawa University
115	"	藤井 健輔	香川大学	工学研究科	"	Kensuke Fujii	Kagawa University
116 酸化膜成長過程の電子分光測定	低温電子線励起酸化によるシリコン表面上の極薄 酸化膜成長過程の電子分光測定	大野 真也	横浜国立大学	工学研究院	Photoemission study of ultrathin oxide film growth process on silicon surfaces by low-temperature electron-stimulated oxidation	Shin-ya Ohno	Yokohama National University
117	"	田中 正俊	横浜国立大学	工学研究院	"	Masatoshi Tanaka	Yokohama National University
118	"	首藤 健一	横浜国立大学	工学研究院	"	Ken-ichi Shudo	Yokohama National University
119	"	九鬼 隆良	横浜国立大学	工学府	"	Takayoshi Kuki	Yokohama National University
120 発	PPMSに対応した3万気圧級高圧力発生装置の開 発	藤原 哲也	山口大学	理工学研究科	Development of 3GPa class high pressure apparatus for PPMS	Tetsuya Fujiwara	Yamaguchi University
121 移	熱容量測定から見た過冷却ガラス転 移	野崎 龍介	北海道大学	理学研究院	Study of the glass transition of polyalcohols by heat capacity measurements	Ryusuke Nozaki	Hokkaido University

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122 移	熱容量測定から見た過冷却ガラス転移	蓑口 あゆみ	北海道大学	ベンチマーク・ビジネス・ラボラトリ	Study of the glass transition of polyalcohols by heat capacity measurements	Ayumi Minoguchi	Hokkaido University
123	"	加藤 美保子	北海道大学	理学院	"	Mihoko Kato	Hokkaido University
124	過冷却ガラスのnearly constant dielectric loss	野崎 龍介	北海道大学	理学研究院	Nearly constant dielectric loss of polyalcohols	Ryusuke Nozaki	Hokkaido University
125	"	蓑口 あゆみ	北海道大学	ベンチマーク・ビジネス・ラボラトリ	"	Ayumi Minoguchi	Hokkaido University
126	"	外川 一	北海道大学	理学院	"	Hajime Sotokawa	Hokkaido University
127	無機イオンを含む多価アルコールのダイナミクス	武田 清	鳴門教育大学		Dynamics of polyhydric alcohols doped with inorganic ions	Kiyoshi Takeda	Naruto University of Education
128	ローレンツ顕微鏡法によるCu-Fe合金中のナノFe磁性粒子構造観察と磁気的性質の対応	竹田 真帆人	横浜国立大学	工学研究院	Lorentz Microscopy and SQUID measurements of the magnetic properties of nano-Fe particles embedded in a Cu-Fe alloy	Mahoto Takeda	Yokohama National University
129	"	高松 久美子	横浜国立大学	工学府	"	Kumiko Takamatsu	Yokohama National University
130	モンテカルロ法による合金の相変態、相安定性の研究と新物質の探索	神藤 欣一	東京工業大学	総合理工学研究科	Study of Phase Stability and Transformation of Alloys and Design of New Materials by Monte Carlo Method	Kin-ichi Jindo	Tokyo Institute of Technology
131	ZnSe/BeTe半導体タイプII量子構造における光励起高密度キヤリアの強磁場磁気光学応答	三野 弘文	千葉大学	自然科学研究科	Optical properties of high-density photo-excited carriers in ZnSe/BeTe type-II quantum wells under high magnetic field	Hirofumi Mino	Chiba University
132	"	鈴木 洋介	千葉大学	自然科学研究科	"	Yousuke Suzuki	Chiba University
133	超強磁場下における半導体短周期超格子のサイクロトロン共鳴に関する研究	百瀬 英毅	大阪大学	低温センター	Cyclotron resonance in short-period semiconductor superlattices under mega-gauss magnetic fields	Hideki Monose	Osaka University
134	"	岡井 宏樹	大阪大学	工学研究科	"	Hiroki Okai	Osaka University
135	"	濱口 智尋	高知工科大学		"	Chihiro Hamaguchi	Kochi University of Technology
136	高分離単層カーボンナノチューブ配向膜の超強磁場下近赤外・可視域光吸収特性	横井 裕之	熊本大学	自然科学研究科	High-field magneto-optical properties of highly isolated and aligned single wall nanotube films in the near-infrared and visible light region	Hiroyuki Yokoi	Kumamoto University
137	"	ムフタール エフエイ	熊本大学	自然科学研究科	"	Mukhtar Effendi	Kumamoto University
138	"	森 啓一郎	熊本大学	自然科学研究科	"	Keiichiro Mori	Kumamoto University

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
139	酸化亜鉛変調ドープ超格子構造における荷電励起子の分光研究	牧野 哲征	兵庫県立大学	理学部	Spectroscopic studies of charged excitons in zinc-oxide based modulation-doped superlattice structures	Takayuki Makino	University of Hyogo
140	"	原田 知典	兵庫県立大学	物理研究科	"	Tomonori Harada	University of Hyogo
141	"	瀬川 勇三郎	理化学研究所	フロンティア研究システム	"	Yusaburo Segawa	The Institute of Physical and Chemical Research
142	重い電子系 UT_2Si_2 (T=Ir, Ru)の高圧・超強磁場磁性	網塚 浩	北海道大学	理学研究院	High-Pressure and High-Field Magnetism of the Heavy-Electron Systems UT_2Si_2 (T=Ir and Ru)	Hiroshi Amitsuka	Hokkaido University
143	"	生沼 慎也	北海道大学	理学研究院	"	Shinya Onuma	Hokkaido University
144	NbSe ₃ のハルス強磁場下輸送現象	掛谷 一弘	筑波大学	数理物質科学研究科	Transport phenomena in NbSe ₃ under pulsed high magnetic fields	Itsuhiko Kakeya	University of Tsukuba
145	"	西村 武徳	筑波大学	数理物質科学研究科	"	Takenori Nishimuar	University of Tsukuba
146	ビスマス系マンガン酸化物における電子状態の磁場制御	徳永 将史	東京大学	工学系研究科	Magnetic field control of the electronic states in bismuth-based manganites	Masashi Tokunaga	The University of Tokyo
147	重い電子系Ce化合物における強磁場物性研究	海老原 孝雄	静岡大学	理学部	Physical Properties at High Magnetic Fields in Ce Heavy fermion system	Takao Ebihara	Shizuoka University
148	"	寺島 智行	静岡大学	理学研究科	"	Tomoyuki Terashima	Shizuoka University
149	新規量子スピニン系の強磁場磁化過程測定	菊池 彦光	福井大学	工学部	High field magnetization measurements on new quantum spin magnets	Hikomitsu Kikuchi	University of Fukui
150	"	藤井 裕	福井大学	遠赤外領域研究開発センター	"	Yutaka Fujii	University of Fukui
151	"	佐々木 隆暉	福井大学	工学研究科	"	Takaaki Sasaki	University of Fukui
152	二次元磁性系の強磁場磁化過程	吉村 一良	京都大学	理学研究科	High field magnetizations of two dimensional magnetic compounds	Kazuyoshi Yoshimura	Kyoto University
153	"	中堂 博之	京都大学	理学研究科	"	Hiroyuki Chudo	Kyoto University
154	"	太田 寛人	京都大学	理学研究科	"	Hiroto Ohta	Kyoto University
155	イオン交換による得られる正方格子磁性体の磁化測定	陰山 洋	京都大学	理学研究科	Magnetization measurements for the square-lattice magnets obtained from ion-exchange reaction	Hiroshi Kageyama	Kyoto University

No.	研究題目	氏名	所属機関	所属部署	Title	Name	Organization
156	イオン交換により得られる正方格子磁性体の磁化測定	大場 紀章	京都大学	理学研究科	Magnetization measurements for the square-lattice magnets obtained from ion exchange reaction	Noriaki Oba	Kyoto University
157	"	辻本 吉廣	京都大学	理学研究科	"	Yoshihiro Tsujimoto	Kyoto University
158	"	渡邊 貴志	京都大学	理学研究科	"	Takashi Watanabe	Kyoto University
159	希薄磁性半導体ナノクリスタルの超強磁場下での物性研究	園田 早紀	京都工芸繊維大学	工芸科学研究科	Study of diluted magnetic semiconductor nanocrystals in extreme high magnetic field	Saki Sonoda	Kyoto Institute of Technology
160	"	播磨 弘	京都工芸繊維大学	工芸科学研究科	"	Hiroshi Harima	Kyoto Institute of Technology
161	"	蓮池 紀幸	京都工芸繊維大学	工芸科学研究科	"	Noriyuki Hasuike	Kyoto Institute of Technology
162	"	廣部 正和	京都工芸繊維大学	工芸科学研究科	"	Masakazu Hirobe	Kyoto Institute of Technology
163	ゼオライト中のアルカリ金属クラスターの強磁場磁化過程	中野 岳仁	大阪大学	理学研究科	High-field magnetization process of alkali metal clusters in zeolite crystals	Takehito Nakano	Osaka University
164	"	チューン・コン・スマッシュ	大阪大学	理学研究科	"	Truong Cong Duan	Osaka University
165	"	松本 淳	大阪大学	理学研究科	"	Jun Matsumoto	Osaka University
166	多目的精密測定用ワイドボアハリス磁石の開発	萩原 政幸	大阪大学	極限量子科学研究センター	Development of a Multi-Purpose Wide Bore Pulse Magnet for Precise Measurements	Masayuki Hagiwara	Osaka University
167	"	八代 晴彦	大阪大学	極限量子科学研究センター	"	Haruhiko Yashiro	Osaka University
168	"	幸田 庄司	大阪大学	理学研究科	"	Shoji Koda	Osaka University
169	強磁場高圧下での磁化測定	萩原 政幸	大阪大学	極限量子科学研究センター	Magnetization measurements under high pressure and high magnetic fields	Masayuki Hagiwara	Osaka University
170	"	千田 敦子	大阪大学	理学研究科	"	Atsuko Senda	Osaka University
171	多孔性配位高分子に吸着した酸素分子の強磁场化過程	小林 達生	岡山大学	自然科学研究科	High-field magnetization process of molecular oxygen adsorbed in microporous coordination polymer	Tatsu Kobayashi	Okayama University
172	近畿半導体TbB ₁₂ の準定常強磁場下の磁化および磁気抵抗	伊賀 文俊	広島大学	先端物質科学研究所	Magnetization and magnetoresistance effect of Kondo semiconductor YbB ₁₂ in a quasi-stable high magnetic field	Fumitoshi Igai	Hirosshima University

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173	近藤半導体TbB ₁₂ の準定常強磁場下の磁化および磁気抵抗	道村 真司	広島大学	先端物質科学 研究科	Magnetization and magnetoresistance effect of Kondo semiconductor YbB ₁₂ in a quasi-stable high magnetic field	Shinji Michimura	Hiroshima University
174	低次元真点共有四面体化合物の磁化過程	淺野 貴行	九州大学	理学研究院	Magnetization process of low-dimensional corner-sharing tetrahedron compound	Takayuki Asano	Kyushu University
175	"	市村 収太	九州大学	理学府	"	Shuta Ichimura	Kyushu University
176	BaVS ₃ 単結晶の強磁場物性	中村 裕之	兵庫県立大学	物質理学研究 科	High-field properties of Ba VS ₃ single crystals	Hiroyuki Nakamura	University of Hyogo
177	"	池野 良亮	兵庫県立大学	物質理学研究 科	"	Ryousuke Ikeno	University of Hyogo
178	RMn ₆ Sn ₆ およびRMn ₆ Ge ₆ (R=rear earth)合金の強磁場磁化過程	堀 富栄	芝浦工業大学	先端工学研究 機構	High field magnetization process for RMn ₆ Sn ₆ and RMn ₆ Ge ₆ (R=rear earth) alloys	Tomiei Hori	Shibaura Institute of Technology
179	プラスチート磁性体の強磁場下での磁化測定	香取 浩子	理化研究所	中央研究所	Magnetization measurements of frustrated magnets in high fields	Hiroko Aruga Katori	The Institute of Physical and Chemical Research
180	"	星 武道	埼玉大学	理工学研究科	"	Takemichi Hoshi	Saitama University
181	メタ磁性を示すスピネル型酸化物の強磁場磁化・磁気抵抗測定	新高 誠司	理化研究所	中央研究所	High-field magnetization and magnetoresistivity measurements of spinel-type oxides exhibiting metamagnetism	Seiji Niitaka	The Institute of Physical and Chemical Research
182	パルスマグネットを用いた強磁場下におけるSr ₁₄ Cu ₂₄ O ₄₁ 単結晶の磁化測定	吉川 明子	理化研究所	播磨研究所	Magnetization measurements of Sr ₁₄ Cu ₂₄ O ₄₁ single crystal in pulsed high magnetic fields	Akiko Kikkawa	The Institute of Physical and Chemical Research
183	バナジウム酸化物ナノチューブの ⁵¹ V-NMR	樹神 克明	日本原子力研 究開発機構	量子ビーム応用 研究部門	⁵¹ V-NMR study on nanotube of vanadium oxide	Katsuaki Komada	Japan Atomic Energy Agency
184	スピン注入素子の磁気光学効果測定	久我 淳	日本放送協会	放送技術研究 所	Measurement of magnet-optical effect of spin-injection device	Kiyoshi Kuga	Japan Broadcasting Corporation
185	"	町田 賢司	日本放送協会	放送技術研究 所	"	Kenji Machida	Japan Broadcasting Corporation
186	"	青島 賢一	日本放送協会	放送技術研究 所	"	Ken-ichi Aoshima	Japan Broadcasting Corporation
187	"	船橋 信彦	日本放送協会	放送技術研究 所	"	Nobuhiko Funabashi	Japan Broadcasting Corporation
188	放射光分光を用いた遷移金属酸化物へテロ界面電子状態の研究	近松 彰	東京大学	工学系研究科	Synchrotron analysis of the electronic structures of heterointerface based on transition metal oxides	Hiroshi Kumigashira	The University of Tokyo
189	"	製原 誠人	東京大学	総合文化研究 科	"	Makoto Minohara	The University of Tokyo

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
190	放射光分光用いた遷移金属酸化物へテロ界面電子状態の研究	摩庭 篤	東京大学	工学系研究科	Synchrotron analysis of the electronic structures of heterointerface based on transition metal oxides	Atsushi Maniya	The University of Tokyo
191	ステイック式冷凍機の開発と極低温磁気測定	稻田 佳彦	岡山大学	教育学部	Development of the stick type cryostat and magnetization measurement	Yoshihiko Inada	Okayama University
192	"	渡部 陽平	岡山大学	教育学研究科	"	Youhei Watanabe	Okayama University
193	シリコン表面の高分解能光電子分光	脇田 高徳	岡山大学	理学部	High resolution photoemission of Si surface	Takanori Wakita	Okayama University
194	レーザー光電子分光による酸化物薄膜の研究	津田 後輔	東京大学	新領域創成科学研究所	Laser-Photoemission Study on Oxide Films	Shunsuke Tsuda	The University of Tokyo
195	強相関型セリウム化合物の量子相転移と磁性	村山 茂幸	室蘭工業大学	工学部	Quantum phase transition and magnetism in the strongly correlated Ce compounds	Shigeyuki Murayama	Muroran Institute of Technology
196	"	堀井 剛志	室蘭工業大学	工学研究科	"	Tsuyoshi Horii	Muroran Institute of Technology
197	単結晶試料による1次元ハルデン物質TMNINの極低温・強磁場磁化測定	神戸 高志	岡山大学	自然科学研究科	Low-temperature and high field magnetization in the Haldane compound TMNIN using single crystal	Takashi Kambe	Okayama University
198	イオン交換により得られる正方格子磁性体の磁化測定	馬場 洋一	京都大学	理学研究科	Magnetization measurements for the square-lattice magnets obtained from ion-exchange reaction	Yoichi Baba	Kyoto University
199	Si(111)-Fe表面のSQUID測定	服部 賢	奈良先端科学技術大学院大学		SQUID measurements of Si(111)-Fe surfaces	Ken Hattori	Nara Institute of Science and Technology
200	スピネル化合物の高圧力中における物性研究	長谷川 啓	琉球大学	理工学研究科	Physical properties of Spinel compounds under high pressure	Kei Hasegawa	University of the Ryukyus
201	バルス強磁場磁化測定による β -FeSi ₂ 単結晶における異常磁化の研究	佐々木 実	山形大学	理学部	Study of Anomalous magnetization of β -FeSi ₂ single crystals by using pulsed magnetometer	Minoru Sasaki	Yamagata University
202	"	大西 彰正	山形大学	理学部	"	Akimasa Ohnishi	Yamagata University
203	"	菊池 健正	山形大学	理工学研究科	"	Takemasa Kikuchi	Yamagata University
204	Si(111)-Fe表面のSQUID測定	服部 梢	奈良先端科学技術大学院大学		SQUID measurements of Si(111)-Fe surfaces	Hattori Azusa	Nara Institute of Science and Technology
205	回転下における個体ヘリウム4の新しいエネルギー散逸	蓑口 友紀	東京大学	総合文化研究科	Novel energy dissipation of solid Helium-4 under rotation	Tomoki Minoguchi	The University of Tokyo
206	PrRh ₂ Ge ₂ の単結晶の磁気転移	張 雅恒	山口大学	理工学研究科	Magnetic transitions on a PrRh ₂ Ge ₂ single crystal	Yaheng Zhang	Yamaguchi University

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207	アニオン性MNX-Chain錯体における高圧力下電気伝導度測定	柴原 壮太	九州大学	理学府	Electrical conductivity measurements of MMX-Chain Complexes under high pressure	Sota Shibahara	Kyushu University
208	パルス強磁場磁化測定による β -FeSi ₂ 単結晶における異常磁化の研究	若林 正博	山形大学	理学部	Study of Anomalous magnetization of β -FeSi ₂ single crystals by using pulsed magnetometer	Masahiro Wakabayashi	Yamagata University

物質合成・評価設備Pクラス(Materials Synthesis and Characterization P Class Researcher)

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
1	分子性伝導体における強相関効果の研究	稻辺 保	北海道大学	理学研究院	Study on the strong correlation effect in molecular conductors	Tamotsu Inabe	Hokkaido University
2	"	Yu Derrick E.C.	北海道大学	理学研究院	"	Derrick E. C. Yu	Hokkaido University
3	"	石川 学	北海道大学	理学研究院	"	Manabu Ishikawa	Hokkaido University
4	"	峯廻 洋美	北海道大学	理学研究院	"	Hiromi Minemawari	Hokkaido University
5	正方格子磁性体の単結晶育成、構造物性評価	陰山 洋	京都大学	理学研究科	Single crystal growth, structural and physical characterization of square lattice antiferromagnets	Hirosi Kageyama	Kyoto University
6	"	大場 紀章	京都大学	理学研究科	"	Noriaki Oba	Kyoto University
7	"	辻本 吉廣	京都大学	理学研究科	"	Yoshihiro Tsujimoto	Kyoto University
8	"	安田 淳	京都大学	理学研究科	"	Jun Yasuda	Kyoto University
9	強相関系遷移金属酸化物の透過電子顕微鏡法による研究	中山 則昭	山口大学	理工学研究科	TEM study of strongly correlated transition metal oxide systems	Noriaki Nakayama	Yamaguchi University
10	"	山本 智康	山口大学	理工学研究科	"	Noriyasu Yamamoto	Yamaguchi University
11	パイロクロア型希土類酸化物の単結晶育成と磁気 フラストレーションの研究	松平 和之	九州工業大学	工学部	Single crystal growth of pyrochlore rare earth oxides and a study of the frustrated pyrochlore magnets	Kazuyuki Matsubira	Kyushu Institute of Technology

物質合成・評価設備Gクラス (Materials Synthesis and Characterization G Class Researcher)

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
1	Cu-Co/Fe合金中のナノCo/Fe磁性粒子の組織、形態的特徴と磁気的性質	竹田 真帆人	横浜国立大学	工学研究院	The relation between the microstructure of nano-Co/Fe particles and magnetic properties	Mahoto Takeda	Yokohama National University
2	"	桑田 幸作	横浜国立大学	工学府	"	Kosaku Kuwata	Yokohama National University
3	精密物性測定に必要な大型オルスティライト (Mg_2SiO_4) 単結晶の合成	金澤 英樹	京都大学	人間・環境学研究科	Synthesis of large single crystals of forsterite (Mg_2SiO_4) for accurate property measurement	Hideki Kanazawa	Kyoto University
4	精密物性測定のためのオリビン大型単結晶の育成	佐藤 博樹	大阪大学	理学研究科	Synthesis of olivine large single crystals for precise measurements of physical property	Hiroki Sato	Osaka University
5	"	熊取谷 瑞穂	大阪大学	理学研究科	"	Mizuho Kumatoriya	Osaka University
6	FZ法によるMgTiO ₃ 結晶の育成	小松 隆一	山口大学	理工学研究科	Growth of MgTiO ₃ single crystal by Floating Zone method	Ryuichi Komatsu	Yamaguchi University
7	"	佐藤 隆康	山口大学	理工学研究科	"	Takayasu Sato	Yamaguchi University
8	フローティングゾーン法を用いた多元系酸化物共晶体の開発	原田 祥久	産業技術総合研究所	材料設計研究室	Materials Design of Multiple Oxides Eutectic using Floating Zone Method	Yoshihisa Harada	National Institute of Advanced Industrial Science and Technology
9	ベータ鉄シリサイドおよびマグネシウムシリサイド単結晶の光学特性評価	鶴殿 治彦	茨城大学	工学部	Characterizations of optical properties of β -FeSi ₂ and Mg ₂ Si single crystal	Haruhiko Udono	Ibaraki University
10	ビスマス系マンガン酸化物における電子相図の研究	徳永 将史	東京大学	工学系研究科	Study of electronic phase diagrams in bismuth-based manganites	Masashi Tokunaga	The University of Tokyo
11	超臨界水中の水熱微粒子合成とその触媒調製法としての応用	澤井 理	東京大学	工学系研究科	Preparation of nano-particles on porous materials using supercritical water impregnation method	Osamu Sawai	The University of Tokyo
12	高圧合成法を用いた充填スクリューラダイト化合物の試料育成およびその評価	田中 謙弥	首都大学東京	理工学研究科	High pressure synthesis of the filled skutterudite compounds and their quality analysis	Kenya Tanaka	Tokyo Metropolitan University
13	電気化学的手法により強磁場中で合成されたナノカーボンの形状に関する研究	横道 治男	富山県立大学	工学部	Study of morphology for nano-carbons synthesized by electrochemical method under high magnetic field	Haruo Yokomichi	Toyama Prefectural University
14	超臨界流体技術による新規機能性複合材料の合成	大島 義人	東京大学	新領域創成科学研究科	Synthesis of high performance composite materials by supercritical fluid technology	Yoshito Oshima	The University of Tokyo
15	"	古館 学	東京大学	新領域創成科学研究科	"	Manabu Furudate	The University of Tokyo
16	酸による石灰質の可溶化を用いた貝類廃棄物処理における新規システムの開発	熊谷 一清	東京大学	新領域創成科学研究科	New Recycling Process of Waste Shells using Dissolution of CaCO ₃ by Acid	Kazukiyo Kumagai	The University of Tokyo

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
17	ビスマス系マンガン酸化物における電荷・軌道秩序の研究	徳永 将史	東京大学	工学系研究科	Study of charge/orbital-ordering in bismuth-based manganites	Masashi Tokunaga	The University of Tokyo
18	高性能希土類磁性材料の構造解析	齋藤 哲治	千葉工業大学	工学部	Structural analysis of high-performance rare earth magnetic materials	Tetsuji Saito	Chiba Institute of Technology
19	マイクロ波プラズマ法を用いたメタンから単層カーボンナノチューブの生成	山口 達明	千葉工業大学	工学部	Production of single-wall carbon nanotubes from methane by microwave plasma technique	Tatsuaki Yamaguchi	Chiba Institute of Technology
20	"	野村 涼	千葉工業大学	工学部	"	Ryo Nomura	Chiba Institute of Technology
21	"	今野 克哉	千葉工業大学	工学部	"	Katsuya Konno	Chiba Institute of Technology
22	光電子分光及び軟X線磁気円二色性を用いた磁性半導体の研究	藤森 淳	東京大学	新領域創成科学研究所	Photoemission and soft x-ray magnetic circular dichroism study of diluted magnetic semiconductor	Atsushi Fujimori	The University of Tokyo
23	"	黄 鐘日	東京大学	新領域創成科学研究所	"	Jong-Il Hwang	The University of Tokyo
24	"	大木 康弘	東京大学	新領域創成科学研究所	"	Yasuhiro Ooki	The University of Tokyo
25	新規有機開殻分子の磁性測定	岡 博之	徳島大学	ソシオテクノサイエンス研究部	Measurements of the Magnetic Properties of Novel Organic Open-Shell Molecules	Hiroyuki Oka	The University of Tokushima
26	HoCu ₂ Si ₂ 単結晶の磁化過程の温度変化	繁岡 透	山口大学	理工学研究科	Temperature dependence of magnetization process on a HoCu ₂ Si ₂ single crystal	Toru Shigeoka	Yamaguchi University
27	"	田中 満	山口大学	理工学研究科	"	Mituru Tanaka	Yamaguchi University
28	ホイスラー型化合物の磁性と伝導の研究	廣井 政彦	鹿児島大学	理学部	Study on magnetic and electrical properties of Heusler alloys	Masahiko Hiroi	Kagoshima University
29	"	小閑 健介	鹿児島大学	理工学研究科	"	Kensuke Koseki	Kagoshima University
30	カーボンナノチューブ内包金属炭化物の超伝導	吉田 嘉孝	いわき明星大学	科学技術学部	Superconductivity of transition-metal carbides encapsulated in carbon nanotubes	Yohitaka Yosida	Iwaki Meisei University
31	遷移金属-希土類錯体の磁性測定	秋津 貴城	慶應義塾大学	理工学部	Magnetic properties of 3d-4f metal complexes	Takashiro Akitsu	Keio University
32	Ni ₂ MnGaの磁性	西原 弘訓	龍谷大学	理工学部	Magnetic properties of Ni ₂ MnCa	Hironori Nishihara	Ryukoku University
33	ラマン分光による窒化物混晶半導体の微視的構造に関する研究	矢口 裕之	埼玉大学	理工学研究科	Raman study of microscopic structures of nitride alloy semiconductors	Hiroyuki Yaguchi	Saitama University

No.	研究題目	氏名	所属機関	所属部署	Title	Name	Organization
34	ラマン分光による窒化物混晶半導体の微視的構造に関する研究	谷岡 健太郎	埼玉大学	理工学研究科	Raman study of microscopic structures of nitride alloy semiconductors	Kentaro Tanioka	Saitama University
35	全天高精度素粒子望遠鏡(Ashra)光学要素評価	佐々木 真人	東京大学	宇宙線研究所	All-sky High Resolution Air-shower detector (Ashra): Test of Optical Elements	Makoto Sasaki	The University of Tokyo
36	"	野田 浩司	東京大学	理学系研究科	"	Koji Noda	The University of Tokyo
37	"	江口 誠	東京大学	理学系研究科	"	Makoto Eguchi	The University of Tokyo
38	コバルト磁性酸化物の元素置換による光誘起磁性の創出の研究	和泉 充	東京海洋大学	海洋工学部	Study of structure, magnetization and light-induced magnetism for cobaltite oxide pellet and single crystal	Izumi Mitsuru	Tokyo University of Science and Tech.
39	"	張 玉鳳	東京海洋大学	海洋科学技術研究科	"	Zhang Yufeng	Tokyo University of Science and Tech.
40	有機・無機複合界面を利用した薄膜マイオセンサのナノ構造に関する研究	和泉 充	東京海洋大学	海洋工学部	Study on nano size structure in thin-filmed biosensor based on organic-inorganic hetero interface	Izumi Mitsuru	Tokyo University of Science and Tech.
41	"	大貫 等	東京海洋大学	海洋工学部	"	Hitoshi Ohnuki	Tokyo University of Science and Tech.
42	"	草刈 聰	東京海洋大学	海洋科学技術研究科	"	Akira Kusakari	Tokyo University of Science and Tech.
43	新規ナノワイスカーおよびナノチューブ状炭素材料の構造研究	緒方 啓典	法政大学	工学部	Structural study on novel carbon nanowhisker and nanotube materials	Hironori Ogata	Hosei University
44	ナノ構造インターカレーション物質の構造解析	本間 格	産業技術総合研究所	エネルギー技術研究部門	Structural Analysis of Nano-sized Intercalation Materials	Itaru Homma	National Institute of Advanced Industrial Science and Technology
45	"	周 豪慎	産業技術総合研究所	エネルギー技術研究部門	"	Hao-Shen Zhou	National Institute of Advanced Industrial Science and Technology
46	"	大久保 将史	産業技術総合研究所	エネルギー技術研究部門	"	Masashi Okubo	National Institute of Advanced Industrial Science and Technology
47	"	島野 哲	産業技術総合研究所	エネルギー技術研究部門	"	Satoshi Shimano	National Institute of Advanced Industrial Science and Technology
48	"	細野 英司	産業技術総合研究所	エネルギー技術研究部門	"	Eiji Hosono	National Institute of Advanced Industrial Science and Technology
49	プラズマCVD法によるカーボンナノウオールの成長とその構造評価および電子状態の探索	斎木 幸一朗	東京大学	新領域創成科学研究科	Atomic and electronic structures of carbon nanowalls grown by plasma enhanced chemical vapor deposition	Koichiro Saiki	The University of Tokyo
50	"	圓谷 志郎	東京大学	新領域創成科学研究科	"	Shiro Entani	The University of Tokyo

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
51	ボロン系およびアルミニ系正20面体クラスター固体の電子物性に関する研究	木村 薫	東京大学	新領域創成科学研究所	Electronic Properties of Boron- and Aluminum-based Icosahedral Cluster Solids	Kaoru Kimura	The University of Tokyo
52	"	岡田 純平	東京大学	工学系研究科	"	Junpei Okada	The University of Tokyo
53	"	高際 良樹	東京大学	新領域創成科学研究所	"	Yoshiki Takagiwa	The University of Tokyo
54	"	兵藤 宏	東京大学	新領域創成科学研究所	"	Hiroshi Hyoudou	The University of Tokyo
55	ホイスラー型化合物の磁性と伝導の研究	重田 出	鹿児島大学	理学部	Study on magnetic and electrical properties of Heusler alloys	Iduru Shigeta	Kagoshima University

長期留学研究員 (Long Term Young Researcher)

No.	研究題目	氏名	所属機関	所属部局	Title	Name	Organization
1	二次元量子反強磁性体におけるスピinn液体とトボロジカル・オーダー	古川 後輔	東京工業大学	理工学研究所	Spin Liquid and Topological Order in Two-Dimensional Quantum Antiferromagnets	Shunsuke Furukawa	Tokyo Institute of Technology

Publications

Division of New Materials Science

Yagi Group

High-pressure behaviors of various oxides, metals, and gas hydrates were studied using high pressure *in situ* X-ray diffraction and Raman spectroscopy. Radial diffraction technique using X-ray transparent gasket became a powerful technique to study the plastic properties of materials relevant to the Earth's deep interior and the formation of lattice preferred orientation by the plastic deformation under uniaxial compression were studied for various materials. These results will provide important information for the discussion of the elastic anisotropy observed at the bottom of the lower mantle and in the inner core of the Earth. Studies on the high-pressure behavior of methane hydrates were continued and various new results were obtained. Because of the very small size of the sample chamber, it was almost impossible to make NMR study using diamond anvil but after long efforts of technical development, it became possible to get meaningful data and an interesting result was obtained on icy material. Further development is expected in this field to clarify the nature of hydrogen bond under pressure.

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13. ^{†*}Fast molecular transport in hydrogen hydrates by high-pressure diamond anvil cell NMR: T. Okuchi, M. Takigawa, J. Shu, H. -K. Mao, R. J. Hemley and T. Yagi, Phys. Rev. B **75** (2007) 144105 (1-5).
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Takigawa Group

We have performed nuclear magnetic resonance experiments on various quantum spin systems and strongly correlated electron systems to explore novel electronic phases with exotic ordering and fluctuation phenomena. The major achievements in the fiscal year 2006 include: (1) discovery of a new high field phase in the frustrated 2D dimer spin system SrCu₂(BO₃)₂, which has both triplet superlattice and continuous variation of magnetization, (2) observation of the rattling phonons in the pyrochlore superconductor KO₂O₆ by ³⁹K NMR and their strong coupling to superconducting carriers by ¹⁷O NMR, (3) identification of a totally symmetric order parameter in the low temperature phase of PrFe₄P₁₂ by ³¹P-NMR, and (4) discovery of a novel ordered phase in SrCu₂(BO₃)₂ under high pressure, where magnetic and non-magnetic dimer form a spontaneous periodic structure.

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Sakakibara Group

We study superconductivity and magnetism of *f* electron systems at low temperatures. The followings are some selected achievements in the fiscal year 2006. (1) Angle-resolved magnetization measurements on the low-field ordered state of PrFe₄P₁₂ revealed that the order parameter is of a scalar type which preserve the cubic symmetry. (2) La substitution for Pr in PrFe₄P₁₂ is found to induce ferromagnetism at 5% La. The scalar order competes with ferromagnetism in PrFe₄P₁₂. (3) Angle-resolved specific heat measurements in the superconducting state of URu₂Si₂ revealed the existence of point nodes along *z* directions. URu₂Si₂ is a *d*-wave superconductor.

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Tajima Group

The principal area of our research is physics and chemistry of molecular assemblies. The major achievements in 2007 include the findings of (1) voltage-induced transition of hemin in BIODE (biomolecular light-emitting diode) and (2) the "magneto-photocurrent effect" at extremely low temperature in /ITO/(PEDOT:PSS)/ P3HT:PCBM/Al/ junction (= polymer solar cell). The latter effect is a new phenomenon in organic thin-film devices.

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Mori Group

We have developed and characterized the exotic molecular conductors, molecular magnet, and molecular dielectrics. The major achievements in 2006 include (1)development of organic-inorganic hybrid magnet, antiferromagnetic supramolecular Cu(II) complex with pyrazino-fused organic donor as the ligand [$\text{CuCl}_2(\text{BP-TTF})$], (2)determination of the checker-board-type charge-ordered state by X-ray measurement for pressure-induced superconductor, β -(meso-BEDT-TTF)₂PF₆, (3)observation of proton migration for -N..H..O- hydrogen-bonded complex of (chloranilic acid)(1,2-diazine)₂ by dielectric response and IR spectra.

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8. Charge Ordering and Superconductivity in Two-dimensional Organic Conductor β -(meso-DMBEDT-TTF)₂PF₆: M. Nakamura, K. Yoshimi and H. Mori, *J. Mag. Mag. Mater.* **310** (2007) 1099-1101.
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Nakatsuji group

We explore novel magnetism and transport phenomena in new transition metal and f-electron based systems. The followings are some relevant results obtained in 2006. (1) Collaborating with Sakakibara group, we have found the unconventional anomalous Hall effect in the spin liquid phase of the metallic pyrochlore oxide Pr₂Ir₂O₇. This is probably due to the non-coplanar spin texture formed in the possible metallic spin ice state of the compound. (2) By the collaboration with Ishida's group at Kyoto University, we found the unconventional spin freezing phenomena in the S = 1 triangular antiferromagnet NiGa₂S₄. Our impurity doping study has clarified that its spin disordered state is probably caused by the critical spin fluctuation associated with a two dimensional antiferromagnetism. (3) We have succeeded in synthesizing a new polymorph of YbAlB₄. Our single crystal study reveals that this new compound is a rare example of Yb based heavy fermion systems.

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Division of Condensed Matter Theory

M. Takahashi Group

In last few years, there are enormous developments on the exact analytical calculation of correlation functions for the spin 1/2-Heisenberg chain. So far we have obtained all the reduced density matrix elements up to successive six lattice sites for the ground state of the XXX chain as well as two-point spin-spin correlation functions up to the 7-th neighbor ones. From our results, other physically interesting correlations, such as emptiness formation probabilities, string correlation functions, scalar- and vector- chiral correlation functions, etc., have been also obtained. Particularly important one may be the evaluation of the entanglement entropy (von-Neumann entropy), which is considered to be a central quantity to measure how the quantum state is entangled. We have compared our exact results with the asymptotic formulas predicted by the field theory. Surprisingly enough, they agree quite well, although our calculations are apparently limited to short range ones.

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K. Ueda Group

A generalization of the Kubo formula for the transport properties through a quantum dot into the non-equilibrium situation has been obtained based on the Keldysh formalism. It has been shown that the conductance may be written as a difference between the noise power and the quantity known as the shot noise in the case of non-interacting systems. Concerning the unusual properties of skutterudite compounds or the beta-pyrochlore compounds, effects of rattling modes have been investigated. In particular, it has been shown that the origin of the unusual temperature dependence of the nuclear quadrupolar relaxation and also of the resistivity may be traced back to the unharmonic nature of the rattling modes.

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3. Low energy excitations of the one-dimensional attractive SU(4) Hubbard model: J. Zhao, K. Ueda and X. Wang, Phys. Rev. B **74** (2007) 233102(1-4).
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6. Theory of Fano-Kondo effect in quantum dot systems: Temperature dependence of the Fano line shapes: I. Maruyama, N. Shibata and K. Ueda, in *Proceedings of SCES2005* edited by E. Bauer, G. Hilscher, H. Michor and H. Muller (Elsevier B.V. 2006) 938-939.
7. Theory of the first order phase transition in the ferromagnetic phase of UGe2: K. Hirohashi and K. Ueda, in *Proceedings of SCES2005* edited by E. Bauer, G. Hilscher, H. Michor and H. Muller (Elsevier B.V. 2006) 965-967.

Takada Group

Employing several techniques including the Green's-function approach, the density-matrix renormalization group, quantum Monte Carlo simulations, band-structure calculations, and several types of variational approaches, we are studying various aspects of quantum many-body problems in condensed matter physics, based mainly on the first-principles Hamiltonian. This year we have studied the following issues: (1) A new formulation for calculating the transition temperature of superconductivity with short coherence length is proposed and applied tentatively to the solids composed of both C₆₀ and C₃₆ molecules. (2) The effective mass of the Jahn-Teller polarons is investigated with special attention to the difference between

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$E \otimes e$ and $T \otimes t$ systems. We find that the internal structure of each Jahn-Teller center plays a crucial role in determining the effective mass. (3) The Coulombic screening in alkali metals is studied to find singular long-range fluctuations in the electronic polarization originating from the divergence in the compressibility of the electron gas. We have proposed a new concept of pseudo-quantum criticality to understand this singular screening effect. The recent experiment by Matsuda et al. on liquid Rb in the supercritical region is explained in terms of this concept. (4) A new scheme is invented to improve on the STLS theory to obtain the local-field factor that is useful in describing the exchange-correlation effects in the electronic response to external electro-magnetic fields. (5) The problem of friction of low-velocity ions in solids is revisited with using the approach of the Current Density Functional Theory. (6) An excitonic molecule is investigated in the diffusion Monte Carlo simulations to find a droplet state formed by antiadiabatic polarization processes. The same method is also applied to a hydrogen molecule in a confining ellipsoid, with which we find a series of phase transitions corresponding to the experimentally observed structural phase transitions in the solid hydrogen under ultra-high pressures. (7) The problem of a single atom in the electron gas has been studied with using the diffusion Monte Carlo method in order to obtain the data to invent a new exchange-correlation energy functional to be used in the post-LDA band-structure calculation.

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Oshikawa Group

Oshikawa group started as a new group at ISSP in April 2006, with the move of Prof. Masaki Oshikawa from Tokyo Institute of Technology. We have studied fundamental issues in various fields in condensed matter and statistical physics. (1) We extended the discussion on the general relation among the fractionalization, quantum statistics, and topological degeneracy, to the systems with non-Abelian statistics. We constructed explicitly the physical processes connecting topologically degenerate vacua, and gave a simple physical derivation of the number of the vacua. (2) We studied one-dimensional spin systems with a spin gap. For coupled Haldane chains (ladders and tubes), we have derived the magnon band structure based on the known properties of the single Haldane chain and Rayleigh-Schrödinger perturbation theory. We also studied the field-induced critical phase of one-dimensional spin systems which had a finite gap at zero field. We found a universal dip in the magnetization as a function of temperature, which indicates the crossover from Tomonaga-Luttinger liquid to the regime characterized by non-relativistic dispersion.

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4. Universal temperature dependence of the magnetization of gapped spin chains: Y. Maeda, C. Hotta and M. Oshikawa, *Phys. Rev. Lett.* (2007), accepted for publication.
5. トポロジカル秩序: 押川 正毅, 数理科学 **528** (2007) 56 - 61.

Tsunetsugu Group

Hirokazu Tsunetsugu moved to ISSP from Yukawa Institute for Theoretical Physics in September 2006. In 2006, we have studied (1) Spin nematic phase in $S=1$ triangular lattice, (2) Mott transition in Kagomé lattice Hubbard model by using the cluster extension of dynamical mean field theory, (3) Modulated hole densities in underdoped cuprates and (4) Strong coupling fixed point in Multilevel Kondo model.

1. Spin Nematic Phase in $S=1$ Triangular Antiferromagnets: H. Tsunetsugu and M. Arikawa, *J. Phys. Soc. Jpn* **75** (2006) 083701 (1-4).

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2. Mott Transition in Kagomé Lattice Hubbard Model: T. Ohashi, N. Kawakami and H. Tsunetsugu, Phys. Rev. Lett. **97** (2006) 066401 (1-4).
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8. Effects of crystalline-electric-field on valence fluctuations in an extended Anderson model: K. Hattori and K. Miyake, J. Magn. Magn. Mater. **310** (2007) 414-415.
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Kohmoto Group

We studied disordered electron systems with spin-orbit coupling on a cylinder using methods of random matrix ensembles. With a threading flux turned on, the single-particle levels will generally avoid, rather than cross, each other. Our numerical study of the level-avoiding gaps in the disordered Rashba model demonstrates that the normalized gap distribution is of a new universal form, independent of the random strength and the system size. The relevance and qualitative implications for spin (Hall) transport are addressed. We also studied tight binding electrons on the haneycomb lattice.

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5. Nodal Structure of Superconductors with Time-Reversal Invariance and Z_2 topological number: M. Sato, Phys. Rev. B **73** (2006) 214502(1-10).
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Sugino Group

We have developed new first-principles computational methods that can extend the frontier. We have developed a modified linear response approach to compute the excitation energy as well as the nonadiabatic coupling within the time-dependent density functional theory (TDDFT) and have performed a coupled electron-nucleus dynamic of molecules. Using the effective screening medium method developed by Otani and Sugino, we have performed first simulation of the electrode dynamics that lead to hydrogen evolution. We have combined the first-principles molecular dynamics and a statistical method (multi-canonical ensemble) to greatly facilitate the free-energy calculation. This was demonstrated using the melting of silicon.

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Kato Group

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Division of Nanoscale Science

Iye Group

Resistively detected nuclear magnetic resonance (RDNMR) experiments have been conducted in 2DEG at various ranges of filling factor. An anomalous dispersive resonance lineshape is observed in the vicinity of $\nu=1$, where skyrmion excitation is responsible for nuclear spin relaxation. Aharonov-Bohm type oscillations in a small array of antidots fabricated from 2D electron system in the quantum Hall regime have been investigated. The two series of oscillation reflects the spin-resolved edge states around the antidots. Phase transition in a square network of superconducting wire subjected to both uniform and checkerboard-pattered magnetic field has been studied and analysed in comparison with the theoretical models of fully frustrated XY model.

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Katsumoto Group

Our research interests are mainly on quantum coherence in nanoscale devices. A representative is a semiconductor quantum dot in few electron regime. We have developed a method to investigate such regime with large flexibility in the potential design and found non-trivial level occupation due to the correlation effect. Appearance of Berry's phase in the AB-type oscillation in an anti-dot lattice of a two-dimensional hole system is another finding in such devices.

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Otani Group

This year we have focused on clarifying the respective contributions to the spin-transfer torque from spin accumulation and local spin current carried by the spin-polarized currents. For this purpose we fabricated nano-pillar and lateral spin valve structures for current induced magnetic switching experiments. Interestingly, the results for the nano-pillar revealed that spin accumulation contributed to about 90% of the necessary torque for the antiparallel to parallel switching, while the parallel to antiparallel switching was totally dominated by the local spin current. Furthermore it was also demonstrated by using the lateral structure that the pure spin-current with no net charge flow can switch the magnetization of a ferromagnetic particle through the spin transfer process.

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Komori Group

Tin-germanium heterogeneous dimers in the Ge(001)-c(4x2) clean surface are confirmed after depositing Sn at room temperature by STM observations, STM manipulation of the dimer buckling, and first-principles calculations. The dimer with the Sn at the upper atom position little reflects the one-dimensional π^* electrons. A homogeneously ordered square array of mono-atomic layer MnN nanoislands is formed on the Cu(001) surface by Mn deposition and nitrogen-ion doze. The self-organization is attributed not to the conventional stress-domain repulsive mechanism but to a short-range attractive interaction model, which explains the assembly of the islands surrounded by small MnN areas on the clean surfaces.

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Yoshinobu Group

We have conducted several research projects in the fiscal year 2006. (1) The interaction between unsaturated organic molecules and the Si(100) surface was investigated using scanning tunneling microscopy (STM). Local electronic states of a single molecule on Si(100) have been investigated by STS. (2) The transient diffusion and cluster formation of water molecules on Rh(111) were investigated using infrared reflection absorption spectroscopy (IRAS). (3) Microscopic diffusion processes of NO on Pt(997) were studied using IRAS and STM. (4) The adsorption and dissociation processes of molecular oxygen on Cu(100) were investigated by HREELS.

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Hasegawa Group

By scanning tunneling microscopy (STM) combined with synchrotron radiation light, microscopic surface images showing a distribution of a designated element was successfully obtained. We found that a tip current induced by photo-irradiation increases when the photon energy is just above the absorption edge of a sample element. From the photo-induced current measured during the tip scanning over the surface, element specific images were obtained. The spatial resolution of the chemical imaging is estimated to be less than 20 nm at present, and it will be improved at advanced high brilliance beam lines. Using low temperature (LT) STM, we developed a method to measure electrical potential profile with meV-scale energy resolution and atomic-scale spatial resolution, measured the potential around charges on a surface having two-dimensional electron gas (2DEG), and observed a decayed potential and the Friedel oscillation, which are characteristic to the screening by the 2DEG. We also studied, using a ³He-cooled LT-STM, superconductivity of nano-meter size Pb islands, whose dimension ranges from 80 to 300 nm in diameter and 7-12 monolayers in thickness, at 1.2K. We found that the superconducting gap increases with the island size and explained it with the superconducting fluctuation.

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Lippmaa Group

Our work on field-effect doping of oxide interfaces continued with the development of a new transistor fabrication process, where the channel interface is grown before electrode formation. This allowed us to dramatically reduce impurity effects in the SrTiO₃ channel and we managed to observe a field effect-driven insulator metal transition in a SrTiO₃ device. We also started to explore the use of DyScO₃ as an insulator for the transistors. Our various collaborative projects also continued during this year, with demonstrations of normal-superconducting transitions in Nb-doped SrTiO₃ films.

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Division of Physics in Extreme Conditions

Ishimoto Group

Magnetization curve of two dimensional anti-ferromagnetic solid ^3He adsorbed on graphite (so called 4/7 phase) has been measured in the low field side up to 3 T by employing NMR technique where the resonance frequencies are variable in the wide range from a few MHz to 100 MHz. It clearly shows the existence of plateau at half of saturation magnetization. The spin pumping effect has been observed in a unique superfluid ^3He A_1 phase, and has been used successfully to derive the intrinsic spin relaxation times there. The obtained values agree with those from a magnetic fountain effect. The observed behavior could be explained by a minute amount of minority spin Cooper pairs near the lower transition temperature into the A_2 phase.

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Kubota Group

Superfluidity was found first in a liquid, liquid ^4He , which consists of interacting Bosons, and then in liquid ^3He , a Fermion superfluid made of Cooper pairs with internal freedom[4, 5]. Dilute gases of atomic Bosons were found to Bose condense and to show also some of superfluid properties. Now, old, but a live question is "if some solid can become a superfluid". Such a question has been asked for more than 36 years since many theorists discussed for its possibility and world wide experimental efforts have been made since then. It is, however, only the beginning of 2004 when the first experimental evidence was officially reported by Kim and Chan. They have shown the observation of Non-classical Rotational Inertia (NCRI) by torsional oscillator technique. Even after that there has not been any confirming observation until the end of last year. We, Kubota group members are excited by our own recent observation of Non-Classical Rotational Inertia (NCRI) in solid ^4He first in February 2006. We have been planning to observe quantized vortices in the supersolid[6] in connection with our study of an artificial superfluid made of superfluid monolayer ^4He film. See the following url as well on our supersolid study: http://online.itp.ucsb.edu/online/smatter_m06/kubota/ Furthermore we are studying possible new superfluids[1, 7].

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Osada Group

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Uwatoko Group

We have investigated the magnetic properties of EuSnP in detail. EuSnP shows an antiferromagnetism below $T_N = 21$ K, in which two metamagnetic transitions were observed with applying magnetic field along both the directions parallel and perpendicular to the c-axis of tetragonal structure. We have carried out the electrical resistances measurement of Ce₂Pd₃Si₅ under pressure up to 8GPa in the temperature interval 2.5 - 300 K. We have performed the resistances measurement of Ce₂Pd₃Si₅ under pressure up to 8GPa in the interval 2.5 - 300 K. The quantum critical point (QCP) exists around 6GPa for this system, but the superconductivity is not observed. However, the result reveals the Kondo temperature increases after vanishing the magnetic ordering at around QCP due to the Kondo coherence effect under pressure. The phase diagram of Fe₂P under pressures up to 8 GPa has been completed using cubic anvil cell pressure equipment. The electrical resistivity was measured in the temperature range of 2.5 – 300K for each pressure, with the current along the crystallographic c- and ab-axes. We found that two types of new phase transitions have occurred under pressures of 2 to 8 GPa. However, both new phases show that the transition temperatures increase with increasing pressure, and they are considered to be due to magnetic phase transitions with different dimensions such as two dimensional(2D) and three dimensional(3D) of Fe₂P, under pressure. Electrical resistivity measurements of YbInCu₄ were carried out under several pressures up to $P = 7.0$ GPa and temperatures down to 0.3 K. At 2.9 GPa, YbInCu₄ undergoes a valence transition with hysteresis. The resistivity coefficient A and the residual resistivity ρ_0 as a function of pressure have a broad peak around 4 GPa. YbInCu₄ around 4 GPa might be in the

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vicinity of a quantum critical point, or that carrier density and ground-state degeneracy of YbInCu_4 might be changed around 4 GPa. Moreover, slight decreases of the resistivities are observed at T_M 2.4K independently of pressures from 3.3 GPa up to 7.0 GPa.

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Division of Advanced Spectroscopy

Watanabe Group

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Suemoto Group

Relaxation processes from charge-transfer excited states of organic radical TTTA (1,3,5-trithia-2,4,6-triazapentalenyl) crystal, which is known to show photoinduced phase transition, were studied by using up-conversion luminescence spectroscopy. The ultrafast depolarization indicates the orientational migration of the charge transfer excitons before relaxing to the relaxed states. The excited state dynamics of the spin ladder system α' -NaV₂O₅ was studied in detail by means of transient reflectance measurements. Most of the complicated time responses were understood as the result of the transient heating of the sample by the pumping light. However, the very fast response at 1.55 eV under high excitation fluence was ascribed to a non-thermal production of charge disordered states.

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Shin Group

New ultrahigh resolution photoemission spectroscopy has been constructed. The energy resolution that is about 0.15 meV is the highest resolution of the world at present. We carried out photoemission spectroscopy on low T_c superconductors, such as organic materials, and heavy Fermion materials. We observed the angle resolved photoemission of high T_c cuprates and Co-based superconductors as well as simple organic materials.

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T. Takahashi Group

The structure of surfaces and interfaces has been studied by X-ray diffraction. First we studied silicon carbide that attracts much attention due to attractive properties such as a wide band gap, a high saturated electron mobility, and a high break-down electric field. The surface structure and the oxidation of SiC were studied. We showed the structure of the clean SiC(0001) with a 3×3 reconstruction is explained by Stark's model with a silicon tetramer sitting on top of the adlayer, and determined the structural parameters. Next we investigated the oxidation of 4H-SiC(0001), and found that oxygen sits on the silicon tetramer. On the other hand, we studied the structure and phase transition of Si(111)-6×1-Ag. From the measurement of crystal-truncation rod scattering along the 00 rod, we showed that the height of Ag atoms don't change in the process of fabrication of the 6x1 surface by annealing the Si(111)- $\sqrt{3}\times\sqrt{3}$ -Ag surface. We also determined the atomic arrangement of Ag in the Si(111)-6×1-Ag surface using grazing incidence X-ray diffraction, and the result indicated that Ag atoms have large lateral displacement in the phase transition of 3×1 and 6×1

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Kuroda Group

Higher-harmonics based on new scheme of laser-ablated controlled plasma and an anomalous intense single high harmonic due to strong resonance enhancement in XUV region are being carried out. Since the first demonstration of 63rd harmonic generation by using a laser-ablation B plume, these studies have progressed rapidly. As quite novel phenomena, the enhancement of single harmonic has achieved by using laser-ablation In, Sn, Sb, Te, Cr, and GaAs plumes. For cutoff energy, the maximum cutoff energy was extended up to 150 eV by using a doubly charged ion. Nano-material formation and controlling by polarization was also studies by using femto second TiS laser system.

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Akiyama Group

In 2006, current-injection T-shaped quantum-wire (T-wire) lasers were achieved. A very low threshold current of 0.27 mA was measured at 30 K in a T-wire laser diode with parallel p- and n-doping layers, and a wide operation temperature of 5-110 K was demonstrated in a T-wire laser diode with perpendicular p- and n-doping layers. We investigated physics of gain from 1D electron-hole systems in T-wire lasers by optical pumping as well as many-body optical responses of 1D electron systems in single T-wire FET structures. Photoluminescence study of single etching-regrowth 1500 nm-wavelength GaInAsP quantum wires was performed in collaboration with Prof. Arai group in Tokyo Institute of Technology, which has been extended to the study of quantum wire lasers. Measurements of quantum yields of luminol chemiluminescence and firefly bioluminescence were demonstrated in collaboration with ATTO corporation ltd. and Prof. Ohmiya group in AIST and Hokkaido University.

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*: joint-research among groups in ISSP

Synchrotron Radiation Laboratory

Kakizaki Group

Our group continued to investigate the electronic and magnetic properties of surfaces and thin films as well as the development of a new spin detector. During FY2006, We have studied the eletronic structures of transitionn metal silicides using high resolution photoemission at HiSOR. By using a single crystal surface, we could observe new spectral features which evidences a quasi particle excxitation near the Fermi level. The new electron spin detector is now installed at the BL19A of the Photon Factory and studied its performandce using Ni(110) as a standard ferromagnetic surface. In 2006, our group joined to the materials research division of the synchrotron radiation research organization of the University of Tokyo. We started to construct a new 25m-long undulator at SPring-8 and new beamlines and experimental apparatuses using undulaor radiation in soft X-ray region. The new beamline will be available for soft X-ray microscopy experiments, time-resolved experiments and others, which will only be possible using high brilliance synchrotron radiation.

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Nakamura Group

A pulsed sextupole magnet for normal and top-up injections was designed and confirmed by simulations to inject the beam into the PF-ring without serious beam loss. A digital beam position monitor system was also developed and its performance test was successfully carried out with a test bench at ISSP. A copper-coated stainless-steel vacuum chamber was experimentally demonstrated at ISSP to work well under the ultra-high vacuum and its copper-coating technique was adopted for a new BL-16 undulator chamber at KEK-PF to keep the beam stable by reducing the resistive-wall wakefield. We started to study ERL(energy recovery linac)-based light sources and develop ERL components in collaboration with KEK, JAEA and other SR facilities. A nine-cell superconducting cavity with a novel HOM(higher-order-mode) damped structure was designed for high current ERLs. Furthermore multi-bunch beam break-up due to long-range resistive-wall wake-fields was intensively investigated to fully understand and cure it.

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†: supported by ISSP joint-use

Matsuda Group

Since establishment of my laboratory in ISSP in December, 2006, we started to develop new experimental systems for surface magnetic transport and extensive photoemission spectroscopy. The former enables *in situ* magnetoresistance measurements and STM/STS observations at temperature less than 10 K and at magnetic field up to 7 T for a sample surface (ultrathin film) prepared under the UHV condition. The latter provides varieties of photoemission spectroscopy methods, high-resolution Fermi surface mapping, band mapping, and symmetry determination of an electronic state, at the ISSP beamline of synchrotron radiation. One of the highlights of our scientific research in 2006 was electronic regulation of a nanofilm by an atomic layer at the film/substrate interface. Fermi surface topology of a Ag film was found to systematically change with metal-induced Si surface superstructure of the substrate.

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Neutron Science Laboratory

Yoshizawa Group

The interplay among orbital, charge, and spin ordering in transition-metal oxides has been studied in detail with use of neutron scattering technique. Following the previous year, the novel spin-charge ordering in the two dimensional Co oxides has been studied in details. The studies on cage compounds such as skutterudites as well as clathrates have been also underway.

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Shibayama Group

Investigations on hydrophobic interactions of hydrogels carrying hydrophobic side groups and of block copolymers in aqueous solutions are carried out with small-angle neutron scattering (SANS) and dynamic light scattering (DLS).

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†: supported by ISSP joint-use

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Hirota Group

We study spin and lattice dynamics of strongly correlated systems, relaxors and multiferroic materials using neutron and x-ray scattering. Our main scientific activities in JFY2006 are summarized as follows: (1) polarized neutron diffraction and inelastic x-ray scattering studies of multiferroic $TbMnO_3$. (2) diffuse scattering and lattice dynamics of the relaxors $Pb(Mg_{1/3}Nb_{2/3})O_3-xPbTiO_3$, $Pb(In_{1/2}Nb_{1/2})O_3$ and $(Bi_{1/2}Nb_{1/2})TiO_3$ (3) neutron and x-ray inelastic scattering of β -pyrochlore superconductors AOs_2O_6 ($A = K, Rb, Cs$) in collaboration with the Hiroi group.

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Yamamuro Group

Our laboratory is studying chemical physics of complex systems from neutron scattering, heat capacity, X-ray diffraction and dielectric measurements. Our target materials are glasses, supercooled liquids, water, clathrate compounds, ionic liquids, and proton conductors. This year, we have started the experiments on copper rubeanate hydrates ($\text{CuC}_2\text{N}_2\text{S}_2\text{H}_2\text{-nH}_2\text{O}$) which are new-type proton conductors with quite high proton conductivity (0.01 S cm^{-1}). Our quasielastic neutron scattering data revealed that the water molecules, assisting conducting protons, diffuse with quite small activation energy in the copper rubeanate lattice. We have also made great progress in the studies of ionic liquids, especially for the coupling/decoupling problem of ionic gels emimTFSI/PMMA.

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Sato Group

This year one graduate student joined the group in April, whereas the JST fellow left the group after obtaining an assistant professor position at Hiroshima University. The activity of the group in 2006 can be summarized as follows: (1) spin Hamiltonian determination of Ni₄ magnetic molecule; (2) elucidation of origin of incommensurate order in CeB₂C₂; (3) development of magnetic structure determination code using the representation analysis technique; (4) magnetic short-range order in the icosahedral Zn-Fe-Sc quasicrystal; (5) development of the versatile inelastic neutron spectrometer for J-PARC. Two graduate students obtained master's degree through the above activities, and several publications will appear in very near future.

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Materials Design and Characterization Laboratory

Y. Ueda Group

The main materials studied in 2006 are (1) low dimensional vanadium oxides, (2) spinel oxides, (3) A-site ordered manganites, (4) low dimensional quantum spin systems, and (5) perovskite and related materials. The main findings are (1) novel metal-insulator transition, charge disproportionation and optical properties, (2) field induced phase transition and orbital order transition, (3) charge/orbital order transition and electronic phase separation, (4) new spin dimer system, and (5) correlated electron system with post perovskite structure and novel vortex state in High Tc materials.

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Takayama Group

We studied interesting cooperative properties of various spin systems mainly by computational methods. One of them is the dipolar system whose spins interact with each other only via the dipole-dipole interaction. We found peculiar magnetic ordered states and the freezing processes to them which are due to the intrinsic frustration effect of the interaction. We also clearly demonstrated that, in spin glasses with short-ranged random exchange interactions, the spin-glass state predicted by the mean-field theory is unstable under a finite magnetic field even of an infinitesimal magnitude, and that their field-cooled (FC) magnetization exhibits quite unusual behavior; when the FC process is halted at low temperatures the FC magnetization changes in the direction opposite to the corresponding equilibrium magnetization.

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Hiroi Group

Recently two families of pyrochlore oxide superconductors were found: one is α -pyrochlore oxide $\text{Cd}_2\text{Re}_2\text{O}_7$ with $T_c = 1.0$ K and the other is β -pyrochlore oxides AOs_2O_6 , where A = Cs, Rb and K, with $T_c = 3.3$ K, 6.3 K and 9.6 K, respectively. The superconductivity of the former compound is of weak-coupling BCS type, while, in the latter compounds, the superconductivity changes from conventional weak-coupling to extremely strong-coupling from Cs to K. In particular, $\text{KO}_{\text{s}2}\text{O}_6$ with the highest T_c exhibits various unconventional features, which may be ascribed to anomalous electron-phonon couplings arising from the heavy rattling of the K ions. Possibly related to this, a first-order phase transition at $T_p = 7.6$ K below T_c has been found only for $\text{KO}_{\text{s}2}\text{O}_6$.

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Kawashima Group

We developed several new techniques and methods of numerical computation in condensed matter physics, and by using them studied strongly-correlated spin and boson systems in low dimensions. The phenomena and systems studied this year include: emergent spatial structure in the SU(N) Heisenberg model and the quantum dimer model, dimension reduction in quasi-two-dimensional frustrated spin systems, critical properties and incommensurate structure in quasi-one-dimensional quantum spin systems with magnetic field, spin glasses on lattices with various geometries, new Monte Carlo method for interacting Boson models, etc. In particular, it was discovered that in some geometrically frustrated magnetic systems, the cancellation among the competing interactions becomes complete as one approaches the quantum critical point, and eventually leads to reduction of the dimensionality of the system from three to two. This phenomena was confirmed by experiments on a layered dimer system, namely BaCuSi₂O₆.

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In dilute magnetic semiconductor quantum wells, $(\text{Cd},\text{Zn})\text{Te}/(\text{Cd},\text{Zn},\text{Mn})\text{Te}$, high-magnetic field magneto-optical study has shown strong dichroic photoluminescence, and found that the biexciton formation is suppressed, while a charged exciton transition becomes dominative with increasing magnetic field. From the high-magnetic field optical measurements, a new type of a charged exciton transition has been discovered in ZnSe/BeTe quantum well structures, which comprise type II quantum confinement alignment. Magneto-optical Faraday rotation measurements in magnetic fields up to 100-200 Tesla were conducted on MCrO_4 (M=Cd,Zn), a prototype of the geometrically frustrated spin systems. As for CdCr_2O_4 , full-magnetization processes were clarified, and magnetic phase diagram was constructed, while in ZnCr_2O_4 a new phase in addition to the 1/2 plateau phase was observed. All these features were found to be well interpreted by the Heisenberg spin theory with a strong spin-lattice coupling by Penc et al. Finally the electromagnetic-flux compression techniques were improved to achieve high energy transfer efficiency by adopting a newly developed ion-copper composite primary coil, resulted in achieving successfully a magnetic field of 630 Tesla, which is the renewed in-door world record.

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Several magnets have been developed to carry out several experiments in pulsed high magnetic fields. For generation of non-destructive 100 T field, a model coil has been produced and tested. The magnet consists of two coils, one of which is small inner coil set in the outer 80 T coil. 100 T-field is thought to be attainable by superimposing a small pulsed field of 20 T on the top of the 80 T field. Generating 85 T (75 + 10 T), the inner coil was destroyed. The result shows a necessity of reinforcement for inner coil which takes a space. For creating more space, the outer coil has been improved. The outer 80 T coil used for various experiments has carried out many 70 T measurements. The 80 T coil with larger bore is on the way of test-shot. High-field NMR measurement has started successfully by use of a newly developed long pulsed magnet. A new split-pair coil for X-ray diffraction has generated 40 T-field with a duration of 25 ms and brought some new results.

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