

分析センター機器使用研究業績(1997.10~1998.9)

A. 元素・質量分析分野

質量分析装置(GC/MS,Q-MS)、示差熱分析装置(TG/DTA) 高分解能 ICP 質量分析装置、ICP 発光分光装置
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H.B.Hou,and H.Narasaki

Determination of antimony in river water by hydride generation ICP-OES
Atomic Spectroscopy,**19**,23-25(1998)

Y.L.Feng,and H.Narasaki

Determination of tin in marine materials by hydride generation high resolution inductively coupled plasma mass spectrometry
Talanta,**46**,1155-1162(1998)

Y.L.Feng,H.Y.Chen,L.C.Tian,and H.Narasaki

Off-line separation and determination of inorganic arsenic species in natural water by high resolution inductively coupled plasma mass spectrometry with hydride generation combined with reaction of arsenic(V) and L-cysteine
Anal.Chim.Acta,**371**,1-9(1998)

T.Umezawa,T.Matsui,Y.Sugihara,A.Ishii,and J.Nakayama

Thermolysis of Selenophene 1,1-Dioxides
Heterocycles,1998**48**,61-69

J.Nakayama,T.Otani,Y.Sugihara,and A.Ishii

Addition of Grignard and Organolithium Reagents to the Negatively Charged Sulfur Atom of 2,2-Bis(diethylamino)ethan-2-ylidene-1-dithioate
Chem.Lett.,1998,**321**

J.Nakayama,N.Masui,Y.Sugihara,and A.Ishii

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Tetrahedron Lett., 1998, **39**, 3525
- J. Nakayama, R. Hasemi, K. Yoshimura, Y. Sugihara, S. Yamaoka, and N. Nakamura
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J. Org. Chem., 1998, **63**, 4912-4924
- J. Nakayama, K. Akimoto, and Y. Sugihara
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Chem. Lett., 1998, 887-888
- K. Matsunoto, A. Ogasawara, S. Kimura, M. Kaneko, N. Hayashi, T. Machiguchi
Synthesis and Properties of Porphyrin-linked Indolizine
Heterocycles, **47**, 877-881 (1998)
- K. Okuma, S. Kuge, Y. Koga, Kosei Shioji, T. Machiguchi
Facile Formation of Cyclic Polysulfides by a New Generation Method for Diatomic
Sulfur
Heterocycles, **48**, 1519-1522 (1998)
- M. Yanagita, I. Aoki*, S. Tokita (*Nihon Soda Co.)
New Fluoran Dyes Having a Phenylenediamine Moiety at the 6-Position of the
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Precise PPP Molecular Orbital Calculations of Excitation Energies of Polycyclic
Aromatic Hydrocarbons Part 4. Evaluation of the Spectrochemical Softness
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- K. Hiruta, S. Tokita, K. Nishimoto*, (*Inst. Fundamental Chem.)
Precise PPP Molecular Orbital Calculations of Absorption Maxima of Quinones
Dyes and Pigments, Vol. **36**, pp. 165-172, (1998)

- T.Mitomo,S.Tsuchiya*,M.Seno**,S.Tokita,(*Univ.Tokyo),(**Nihon Univ.)
The Reactions of Sulfilimines with TCNQ and Their Characteristic Charge-transfer Complexes as Products
Mol.Cryst.Liq.Cryst.,Vol.**312**,pp.263–283,(1998)
- T.Tachikawa,H.Sakurai,G.Masuda*,S.Tokita>(*Nishinbo),
Synthesis of Novel Fluorescent Reagents with a Carbodiimide Moiety and Their Applications for DNA Probe
J.Photopoly.Sci.Technol.,Vol.11,pp.19–22.,(1998)
- T.Watamabe,C.Yanashima,T.Kawashima*,H.Nakahara*,S.Tokita>(*Department of Chemistry , Faculty of Science)
Photochromic Properties of Benzodioxanthene Analogies Having Alkyl Group and Their Langmuir–Blodgett Films
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- Y.Kubo, N.Hirota, S.Maeda,and S.Tokita
Naked-Eye Detectable Chiral Recognition Using a Chromogenic Receptor
Anal.Sci.,**14**,183(1998)
- H.Shitara,Y.Aoki,T.Hirose and H.Nohira
Synthesis and Helical Twisting Power of Optically Active 2-Methylchroman-2-carboxylic Acid Derivatives as New Chiral Dopants for Nematic Liquid Crystals
Chemistry Letters,261–262,1998
- H.Liu and H.Nohira
Synthesis and Mesomorphic properties of Novel Phenylbenzoate Liquid Crystals with a 4-(2H-Perfluoropropyl)-1-butanol tail
Ferroelectrics,**207**,541–553,1998
- H.Liu and H.Nohira
Influence of fluorination Extent on Liquid Crystalline properties of Semi-perfluorinated Phenylpyrimidine Ferroelectric Liquid Crystals
Liquid Crystals,**24**,719–726,1998
- T.Hirose,B.W.Baldwin,Z.-H.Wang, and C.H.L.Kennard
(1 α ,3 α ,5 α)-1,3,5-Trimethyl-1,3,5-cyclohexanetricarboxylic Acid Acetonitrile Solvate
Acta Crystallographica,**C54**,1143–1144,1998
- Y.Aoki and H.Nohira
Antiferroelectric liquid crystals and their chiral structures

Ferroelectrics,**212**,212,273–280,1998

D.Terunuma,T.Kata,R.Nishio,K.Matsuoka,H.Kuzuhara,Y.Aoki,H.Nohira
Preparation of New Carbosilane Dendrimers Carryng Mesogenic Groups
Chem.Lett.,59–60(1998)

O.Sato,N.Matsuda,S.Yoshioka,A.Takahashi,Y.Sekiguchi,J.Tsunetsugu and (the late)T.Nozone

Efficient Syntheses and the Nucleophilic Substitution of Dibromo- and Tribromo-azulenequinones:Differences in Reactivity between Five- and Seven-membered Ring Moieties

J.Chem.Res(M),0635–0647(1998) and *J.Chem.Res(S)*,108–109(1998)

B. 磁気共鳴分析分野 超伝導核磁気共鳴装置
(AM400,ARX400,AC300P,AC200)

M.Watanabe,A.Nagasawa,M.Sato,I.Motoyama,T.Takayama

Molecular structure of Hg-bridged tetramethyl[2]ferrocenophane salt($[[C_5H_4(CH_3)_2]_2Fe-Hg-Fe[C_5H_4(CH_3)_2]_2]^+(BF_4^-)_2$)and related salts
Bulletin of the Chemical Society of Japan.,**71**,1071–1079(1998)

T.Fujihara,J.Aonahata,S.Kumakura,A.Nagasawa,K.Murakami,and T.Ito
Kinetic Study on the Substitution of Dimethylacetamide for the terminal aqua ligands in the trinuclear chromium(III)complexes, $[Cr_3(\mu_3-O)(\mu-RCO_2)_6(H_2O)_3]^+$ (R=H,CH₃,CH₃CH₂,CH₂Cl, CHCl₂,CH₃OCH₂,(CH₃)₃C,CH₂ClCH₂,and(CH₃CH₂)₂CH).Elucidation of the mechanism from the activation volume and the substituent effect of bridging carboxylate ligands.
Inorganic Chemistry,**37**,3779–3784(1998)

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Preparation of New Carbosilane Dendrimers Carryng Mesogenic Groups
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D.Terunuma,K.Nagumo,N.Kamata,K.Matsuoka,H.Kuzuhara
Preparation of Amphiphilic polysilanes Bearing Chiral Pendant Ammonium Moieties
Chem.Lett.,681–682(1998)

N.Kamata,S.Aihara,W.Ishizuka,M.Umeda,D.Terunuma,Y.Yamada,S.Furukawa
Temperature-dependent photoluminescence and electroluminescence properties of polysilanes
J.Non-Crystalline Solids.,538(1998)

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(1 α , 3 α , 5 α)-1,3,5-Trimethyl-1,3,5-cyclohexanetricarboxylic Acid Acetonitrilen
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Acta Crystallographica, C54, 1143–1144, 1998

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Antiferroelectric liquid crystals and their chiral structures

Ferroelectrics, 212, 212, 273–280, 1998

K.Matsunoto, A.Ogasawara, S.Kimura, M.Kaneko, N.Hayashi, T.Machiguchi

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Seven–membered Ring Moieties
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C. X線解析分野

X線回折装置(18K(縦型、横型)、RAD-B)、蛍光X線分析
4軸型単結晶X線構造解析装置(3K、18K、18K 迅速型)

- K.Unoura,A.Yamazaki,A.Nagasawa,Y.Kato,H.Itoh,H.Kudo,Y.Fukuda
Substituent effects of cis–dioxobis(dithiocarbamate)molybdenum(VI) on redox
properties:redox potentials for one–electron reduction and second–order rate
constants for oxygen atom transfer
Inorganica Chimica Acta,**269**,260–268(1998)
- M.Watanabe,A.Nagasawa,M.Sato,I.Motoyama,T.Takayama
Molecular structure of Hg–bridged tetramethyl[2]ferrocenophane

salt($[[C_5H_4(CH_3)_2]_2Fe-Hg-Fe\{C_5H_4(CH_3)_2\}]^{2+}(BF_4^-)_2$) and related salts

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Tetrahedron Lett., 1998, **39**, 2605

M. Watanabe, I. Motoyama, T. Takayama, and M. Sato

A Molecular Structure of Mixed Valence Biruthenocenium (Ru^{II}Ru^{IV}) Salts

$[Ru^{II}Cp(C_5H_4C_5H_4)CpRu^{IV}L]^2+(BF_4^-)_2$ -(L=NCCH₃, N(CH₃)₄N)

J. Organomet. Chem., **549**, 13–23 (1997)

M. Sato, and H. Asano

The Transition-metal Complexes of the Thiamacrocycle Containing Two Ferrocene

Nuclei in the Main Chain. Synthesis, properties, and Molecular Structure of

Ag(I), Cu(I), Pd(II), and Pt(II) Complexes of

1,5,16,21-Tetrathia[5.5]ferrocenophane

J. Organomet. Chem., **555**, 167–175 (1998)

S. Nakashima, S. Nakazaki, H. Sakai, M. Watanabe, I. Motoyama, and M. Sato

Even-Odd Character and Dynamic Electronic State in Binuclear Ferrocene

Derivatives with Long Alkyl Substituents

Inorg. Chem., **37**, 1959 (1998)

M. Watanabe, M. Sato, A. Nagasawa, I. Motoyama, and T. Takayama

Molecular Structures of some syn-[1.1]Metallocenophanes, anti-Ferrocenium[1.1]

ruthenocenophane, and Their NMR Spectroscopies

Bull. Chem. Soc. Jpn., **71**, 2127 (1998)

小林秀彦、箕輪光、山本吉記、柿崎浩一、平塚信之
熱分解法によるマグネタイト被覆セリダスト粒子の調製と焼結
粉体粉末冶金協会論文誌, Vol.45, No.1, pp.68-72, 1998

柿崎浩一、新妻永一郎、平塚信之
バリウムフェライト垂直磁気異方性膜に及ぼす AIN 下地膜の効果
粉体粉末冶金協会論文誌, Vol.45, No.1, pp.82-85, 1998

平塚信之、山本誠、柿崎浩一
配向性Mn-Znフェライトの高周波特性
粉体粉末冶金協会論文誌, Vol.45, No.1, pp.86-90, 1998

H.Kobayashi, Y.Kamegaya, F.Noguchi and T.Mitamura
Effect of Annealing Conditions on the Lifetime of Ta₂O₅-Pt Coated Titanium
Electrodes

DENKI KAGAKU, **65**, 1113-1115 (1997)

D. 表面複合分析分野

表面複合分析装置(ESCA/AES)、走査プローブ顕微鏡
(SPM/AFM)、分析走査電子顕微鏡(S-4100, S-24000, エネルギー
分散分析)

小林秀彦、箕輪光、山本吉記、柿崎浩一、平塚信之
熱分解法によるマグネタイト被覆セリダスト粒子の調製と焼結
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平塚信之、中村陽平、柿崎浩一、小林秀彦
高周波用異方性傾斜Ni-Znフェライト
粉体粉末冶金協会論文誌, Vol.45, No.3, pp.248-252, 1998

E. 分光分析分野

フーリエ変換赤外分光光度計(FT-IR)、走査顕微鏡 FT-IR(アリス)、FT-IR ラマン

T.Umezawa, T.Matsui, Y.Sugihara, A.Ishii, and J.Nakayama
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