**Highlight Review**

672 Structural and Functional Model Systems for Analysis of the Active Center of Nitrile Hydratase

Takuma Yano, Tomohiro Ozawa, and Hideki Masuda

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We focused a unique active site structure of nitrile hydratase (NHase), where the central metal ion (Co\text{III} or Fe\text{III}) is surrounded with two amide nitrogens in peptide backbone, one cysteine sulfur and two oxidized cysteine sulfurs (Cys–SO and Cys–SO\textsubscript{2}) as the donor set. In this review, the biological implication of the unique structure has been discussed in the relation with the nitrile hydration mechanism by using model complexes.

**Letter**

678 Two Neutral Open-framework Metal Phosphites with Ten-ring Channels Constructed by Three-, Four-, and Five-connected Centers

Yang Yang, Yongnan Zhao, Jianguo Yu, Nan Pang, Hao Su, and Sha Pang

Stable Halodilithiosilanes: Synthesis and Reactivity of TsiXSiLi₂ (X = Br and Cl)

\[
\begin{align*}
T_{	ext{Si}} & \quad X & \quad 2\text{LiNp} & \quad T_{	ext{Si}} & \quad \text{Li} & \quad 2\text{LiNp} & \quad T_{	ext{Si}} & \quad \text{Li} \\
X & \quad X & & & & & & \\
-78 \degree\text{C, THF} & & & & & & & \\
\end{align*}
\]

\[
\text{X}=\text{Cl, Br}
\]

Tsi = -C(SiMe₃)₃

Myong Euy Lee, Young Mook Lim, Joo Young Son, and Won Guk Seo
Electronic Supporting Information

Alternative Route to Metal Halide Free Ionic Liquids

Koichiro Takao and Yasuhisa Ikeda
doi:10.1246/cl.2008.682
Electronic Supporting Information

Multicomponent Molecular Layers that Exhibit Electrochemical Potential Flip on Au(111) by Use of Proton-coupled Electron-transfer Reactions

Hiromitsu Uehara, Tomohiko Inomata, Masaaki Abe, Kohei Uosaki, and Yoichi Sasaki
Electronic Supporting Information

Synthesis and Electroluminescent Properties of New Amorphous Cyclohexyl- and Hexyl-substituted Ter(9,9-dialkylfluorene)s

Eunhee Lim, Byung-Jun Jung, Sung Min Kim, Bong Ok Kim, and Hong-Ku Shim
Electronic Supporting Information

Effect of Liquid Viscosity on the Internal Fluidity of a Droplet Sliding on a Fluoroalkylsilane Coating

Yuu Sakurada, Shunsuke Suzuki, Munetoshi Sakai, Akira Nakajima, Yoshikazu Kameshima, and Kiyoshi Okada
Electronic Supporting Information
A Relationship between Molecular Orientation and Current-Voltage Characteristics in Poly(3-hexylthiophene) Thin Film

Takeshi Komino, Hiroyuki Tajima, and Masaki Matsuda
doi:10.1246/cl.2008.690
Electronic Supporting Information

Synthesis, Structure, and Luminescent Property of a 3D Polymer Containing Silver Ions

Yajuan Li, Huihua Song, Tao Wang, and Miying Jia
Electronic Supporting Information

Synthesis and Magnetic Properties of Conjugated Radical Polymer

Daisuke Kato, Katsuya Inoue, Jun Akimitsu, and Jiro Abe
doi:10.1246/cl.2008.694
Electronic Supporting Information

Dynamic Behavior of Cyclic Hemiacetals of 2-Hydroxy-2-(2-hydroxyphenyl)-1,3-indandione Derivatives

Suzumi Hashimoto, Natsumi Sakuma, Hidetsugu Wakabayashi, Hiroshi Miyamae, and Keiji Kobayashi

Simultaneous On-chip Surface Plasmon Resonance Measurement of Disease Marker Protein and Small Metabolite Combined with Immuno- and Enzymatic Reactions

Kohei Nakamoto, Ryoji Kurita, Naoyuki Sekioka, and Osamu Niwa
Electronic Supporting Information
700 Photoluminescence Enhancement of ZnS–AgInS$_2$ Solid Solution Nanoparticles Layer-by-layer-assembled in Inorganic Multilayer Thin Films

Tatsuya Kameyama, Ken-ichi Okazaki, Yuji Ichikawa, Akihiko Kudo, Susumu Kuwabata, and Tsukasa Torimoto

702 Azobenzene–Helical Peptide Conjugate: Electronic Structure and Photoisomerization in Solution and on Surface

Mika Wakabayashi, Shigekatsu Fujii, Tomoyuki Morita, and Shunsaku Kimura

704 A Convenient Method for the Lewis Base-catalyzed Synthesis of $\alpha,\beta$-Unsaturated Carboxylic Esters Using Trimethylsilylketene Ethyl Trimethylsilyl Acetal and Carbonyl Compounds

Makoto Michida and Teruaki Mukaiyama

706 Growth of ZnO Single Crystals by Annealing Sol–Gel-derived Films with PDMS Prepressing

Jui-Chi Lee, Ing-Chi Leu, and Min-Hsiung Hon

708 An Onium Salt-catalyzed Direct Polycondensation of Lactic Acid

Hisako Iwahashi, Tatsuya Oka, and Atsushi Abiko
710 Highly Selective NH$_3$ Formation in a NO–CO–H$_2$O Reaction over Pt/TiO$_2$

Tetsuya Nanba, Shouichi Masukawa, Junko Uchisawa, and Akira Obuchi

712 Convenient Fabrication and Property Investigations of Uniform TiN Hollow Nanocages

Jing Li, Liancheng Wang, Zhicheng Ju, Liqiang Xu, and Yitai Qian

714 Preparation of Mesoscopic TiO$_2$–SnO$_2$ Composite Grains by Spinodal Decomposition under 28 GHz Microwave Irradiation

Hirotugu Takizawa, Akio Hagiya, Takuya Aoyagi, and Yamato Hayashi
doi:10.1246/cl.2008.714

716 Chiral Bead-like Trimer of Tris(2,4-pentane-dionato)ruthenium(III)

Hisako Sato, Jun Kameda, Yutaka Fukuda, Masa-aki Haga, and Akihiko Yamagishi
Electronic Supporting Information

718 Photoinduced Release of Oligonucleotide-conjugated Silica-coated Gold Nanorods Accompanied by Moderate Morphological Changes

Yukichi Horiguchi, Shuji Yamashita, Takuro Niidome, Naotoshi Nakashima, and Yasuro Niidome
doi:10.1246/cl.2008.718
Electronic Supporting Information
720 Mechanistic Investigation of the Hydration Reaction of [Cr(q-silabenzene)(CO)3]: Hydrido(silacyclohexadienyl)chromium Complex as an Intermediate

Yusuke Tanabe, Yoshiyuki Mizuhata, and Norihiro Tokitoh
Electronic Supporting Information

722 Fabrication of Urchin-like Bismuth Nanostructures via a Facile Solvothermal Route

Chunjuan Tang, Y. X. Zhang, Guozhong Wang, H. Q. Wang, and Guanghai Li

724 Ruthenium-catalyzed 1,4-Addition of Organoboronic Acids to \( \alpha,\beta\)-Unsaturated Ketones

Ryo Shintani and Tamio Hayashi
Electronic Supporting Information

726 A Solid-state Chiral Fluorophore Obtained from Achiral Fluorescent Biphenyl-4-carboxylic Acid and rac-Phenylmethylamine Derivatives

Yoshitane Imai, Katuzo Murata, Hideki Matsuno, Kensaku Kamon, Tomohiro Sato, Reiko Kuroda, and Yoshio Matsubara
doi:10.1246/cl.2008.726
Electronic Supporting Information

728 Application of Magnetically Simulated Microgravity for Preparation of Thin Films with Carbon Nanotubes

Akio Katsuki, Hiromi Yamamoto, Yoshihisa Fujiwara, Masao Fujiwara, Morinobu Endo, and Yoshifumi Tanimoto

A PVA thin film in which multiwall carbon nanotubes were included was prepared in simulated microgravity created by a high magnetic field.
730 A General Hydrothermal Method to $V_2VI_3$ Thermoelectric Nanomaterials Directly from the Corresponding Elements

Bo Zhou, Jian-Ming Hong, and Jun-Jie Zhu

732 Poly($p$-phenyleneethynylene)–Silica Gel Hybrids without Any Compatibilizer

Kenta Kokado and Yoshiki Chujo

734 Particle-size Effects of Activated Carbon-supported Rhodium Catalysts on Hydrogenation of Naphthalene in Supercritical Carbon Dioxide Solvent

Norihito Hiyoshi, Chandrashekhar V. Rode, Osamu Sato, Yoshio Masuda, Aritomo Yamaguchi, and Masayuki Shirai
doi:10.1246/cl.2008.734
Electronic Supporting Information

736 One-step Fabrication of Nickel Hierarchical Superstructures

Zhe Chen, Minhua Cao, and Xiaoyan He
Electronic Supporting Information

738 Efficient $I(5\,^2P_{1/2})$ Production by the Reaction of $I_2$ with NCl$_3$ Flame

Liucheng Li, Liping Duo, and Bailing Yang
doi:10.1246/cl.2008.738
Electronic Supporting Information
Manganese-catalyzed Synthesis of Hydantoin Derivatives from Terminal Alkynes and Isocyanates

Yoichiro Kuninobu, Kou Kikuchi, and Kazuhiko Takai
Electronic Supporting Information

Synthesis and Properties of Electrophosphorescent Conjugated Polymers Containing Iridium Complexes in Polymer Backbone

Yong Zhang, Yan Xiong, Chun Li, Junbiao Peng, and Yong Cao
doi:10.1246/cl.2008.742

Transesterification of Phosphotriester Paraoxon Catalyzed by ZnCl₂ Supported on Silica Gel

Ismail O. Kady

Synthesis of Hierarchically Meso-/Macroporous Titanium Tetraphosphonate Materials with Large Adsorption Capacity of Heavy Metal Ions

Xue-Jun Zhang, Tian-Yi Ma, and Zhong-Yong Yuan
doi:10.1246/cl.2008.746

Preparation of Superhydrophilic Mesoporous Silica Thin Films Containing Single-site Photocatalyst (Ti, V, Cr, Mo, and W oxide moieties)

Yu Horiuchi, Kohsuke Mori, Norikazu Nishiyama, and Hiromi Yamashita
doi:10.1246/cl.2008.748
Electronic Supporting Information
Mono-cyclopropanated Fullerene Dimer C_{120}O and Its Application in a Bulk Heterojunction Solar Cell

Lars Weber, Steffi Sensfuss, Uwe Ritter, and Peter Scharff
doi:10.1246/cl.2008.750
Electronic Supporting Information

Preparation of Plywood-like Fe$_3$BO$_5$ Nanorods by a Facile Hydrothermal Method at Low Temperature

Haiping Qi and Qianwang Chen
doi:10.1246/cl.2008.752

Isotope Effect on Spin-crossover Transition in a New Two-dimensional Coordination Polymer [Fe$^{II}$I(C$_5$H$_5$)$_2$][Au$^{I}$I(CN)$_2$], [Fe$^{II}$I(C$_5$D$_5$N)$_2$][Au$^{I}$I(CN)$_2$], and [Fe$^{II}$I(C$_5$H$_5^{15}$N)$_2$][Au$^{I}$I(CN)$_2$]

Takashi Kosone, Chihiro Kachi-Terajima, Chikahide Kanadani, Toshiaki Saito, and Takafumi Kitazawa
doi:10.1246/cl.2008.754
Electronic Supporting Information

Oxidation States of Antimony and Arsenic in Marine Ferromanganese Oxides Related to Their Fractionation in Oxic Marine Environment

Teruhiko Kashiwabara, Satoshi Mitsunobu, Anirban Das, Takaaki Itai, Masaharu Tanimizu, and Yoshio Takahashi

Stabilization of DNA Multiassembly by Addition of a Phosphate Group at the 5'-Sticky End

Aya Tanaka, Yasutaka Matsuo, Kenichi Niikura, and Kuniharu Ijiro
doi:10.1246/cl.2008.758
Electronic Supporting Information
**760 Spin-crossover Transition Coupled with Another Solid–Solid Phase Transition for Iron(II) Thiocyanate Complexes Chelated with Alkylated N-(Di-2-pyridylmethylene)-anilines**

Yuya Oso, Daisuke Kanatsuki, Shuichi Saito, Takashi Nogami, and Takayuki Ishida
Electronic Supporting Information

**762 Hydrothermal Synthesis of GdVO$_4$:Ho$^{3+}$ Nanorods with a Novel White-light Emission**

Yiguo Su, Guangshe Li, Xiaobo Chen, Junjie Liu, and Liping Li
doi:10.1246/cl.2008.762
Electronic Supporting Information

**764 Miniaturization of Nanofibers Composed of Melamine-appended Perylene Bisimides and Cyanurates**

Tomohiro Seki, Shiki Yagai, Takashi Karatsu, and Akihide Kitamura
Electronic Supporting Information

**766 Preparation, Characterization, and Field-effect Transistor Performance of Benzod[1,2-$d$;4,5-$d'$]bisthiazole Derivatives**

Masashi Mamada, Jun-ichi Nishida, Shizuo Tokito, and Yoshiro Yamashita
Electronic Supporting Information

**768 Bis(1-methylimidazole) Complex of Iron(III) Oxyppyriporphyrin Adopting an Intermediate-spin State**

Hajime Eguchi, Yoshiki Ohgo, Akira Ikezaki, Saburo Neya, and Mikio Nakamura
doi:10.1246/cl.2008.768
A stereocontrolled total synthesis of enantiomerically pure (−)-gleenol using sterically congested dihydropyran to construct the spiro[4.5]decane through the Claisen rearrangement has been achieved.

Atsuo Nakazaki, Tomohiro Era, and Susumu Kobayashi
Electronic Supporting Information

A New Amphiphilic and Thermoresponsive Polysilsesquioxane Having Alkoxyethylamide Group

Tomonori Matsuoka, Shin-ichi Yamamoto, and Osamu Moriya
doi:10.1246/cl.2008.772

Autoxidation Resistant Cyclopentyl Methyl Ether

Hayato Hoshino, Kazuhisa Sakakibara, and Kiyoshi Watanabe
doi:10.1246/cl.2008.774
Electronic Supporting Information

Hydrothermal Preparation of Biomineral Botallackite Cu₂(OH)₃Cl Hollow Nanoarchitectures

Zhitao Chen and Lian Gao

Influence of the Work Function of Chemically Modified Indium–Tin–Oxide Electrodes on the Open-circuit Voltage of Heterojunction Photovoltaic Cells

Khayankhyavaa Sarangerel, Chimed Ganzorig, Masamichi Fujihira, Masaru Sakamura, and Kazuyoshi Ueda
Electronic Supporting Information
780 An Improved Synthesis of Methyl Protodioscacin: Tautomerization and Direct Access to the 3-O-Substituted Kryptogenin

Qing-Chun Xu, Yang Liu, Jiao Liu, Chun-Xian He, Mao-Cai Yan, and Mao-Sheng Cheng
doi:10.1246/cl.2008.780
Electronic Supporting Information

782 Photoreduction of 1,2-Diarylcyclopropanes by Hydroxide Ion

Yasuharu Yoshimi, Naohisa Wada, Koichi Sasamoto, Tatsuya Itou, and Minoru Hatanaka
doi:10.1246/cl.2008.782
Electronic Supporting Information

784 Synthesis and Properties of Cyclic [5]meta-Phenyleneacetylene and Its Corresponding Cyclophane Polyone, [2,2](1,3)Cyclophanedecaone

Jun Yamakawa, Masanori Ohkoshi, Futoshi Takahashi, Tomohiko Nishiuchi, Yoshiyuki Kuwata, Tohru Nishinaga, Masato Yoshida, and Masahiko Iyoda
doi:10.1246/cl.2008.784
Electronic Supporting Information

786 Extended Pummerer Reaction of Arylketene Dithioacetal Monoxides with Aromatic Compounds by Means of Trifluoromethanesulfonic Anhydride

Suguru Yoshida, Hideki Yorimitsu, and Koichiro Oshima
doi:10.1246/cl.2008.786

788 Single-component CT Crystals Based on 1,4-Benzoxquinone Derivatives and TEMPO Radical

Mitsunori Nobusawa, Hiroki Akutsu, Jun-ichi Yamada, and Shin’ichi Nakatsuji
Electronic Supporting Information
790 Continuous Supercritical Low-temperature Methanol Synthesis with n-Butane as a Supercritical Fluid

Prasert Reubroycharoen, Jun Bao, Yi Zhang, and Noritatsu Tsubaki

792 On-site Determination of Trace Nickel in Liquid Samples for Semiconductor Manufacturing by Highly Sensitive Solid-phase Colorimetry with α-Furil Dioxide

Hitoshi Mizuguchi, Yan-Fan Zhang, Hirofumi Onodera, Saori Nishizawa, and Junichi Shida
doi:10.1246/cl.2008.792

794 Iron Salt-catalyzed Multipoint Alkylation of Pyrrole with Vinyl Ketones

Motoi Kawatsura, Masamune Fujiwara, Hiroyuki Uehara, Shun Nomura, Shuichi Hayase, and Toshiyuki Itoh
doi:10.1246/cl.2008.794
Electronic Supporting Information

796 Palladium-catalyzed Cross-coupling of Benzylic Carbonates with Organostannanes

Masato Ohsumi and Ryoichi Kuwano
doi:10.1246/cl.2008.796
Electronic Supporting Information

798 High Electroconductivity of Wood Char Obtained by Iron-catalyzed Carbonization

Tsutomu Suzuki, Hiroshi Matsuzaki, Kyoko Suzuki, Yukie Saito, Sei-ichi Yasui, Noriyasu Okazaki, and Tetsuo Yamada
doi:10.1246/cl.2008.798
Iron(II) Chloride-mediated Addition of Di-alkylmagnesium to Carbonyl Compounds

Addition reactions to carbonyl compounds with a complex reagent, prepared from organomagnesium species and iron(II) chloride, were examined. The complex reagent works as 1,2-addition nucleophile to an easily enolizable ketone such as β-tetralone; it added to keto ester chemoselectively.

Mutsumi Sada and Seijiro Matsubara
doi:10.1246/cl.2008.800

Crystal Structure of Boryllithium with Two THF Molecules and DFT Analysis of Its Property as a Boryl Anion

Makoto Yamashita, Yuta Suzuki, Yasutomo Segawa, and Kyoko Nozaki
doi:10.1246/cl.2008.802
Electronic Supporting Information

Formation of Incompletely Condensed Oligosilsesquioxanes by Hydrolysis of Completely Condensed POSS via Reshuffling

Ze Li and Yusuke Kawakami
Electronic Supporting Information