CSJ Journal Report



Bulletin Chemical Society Japan



Award Accounts

Hiroshi Masuhara



No.7 2013

iety of Japan

2011–2013 First Half Hot Articles

Nanoclusters Nanotubes Mesoporous Materials Supramolecules Metal–Organic Frameworks (MOF) Organic FET C–H Bond Activation Cross Coupling Efficient Synthesis C–C Bond Activation Asymmetric Catalysis



Nanoclusters

Near-Field Nanooptics Open Access Award Accounts



Nanooptical Studies on Physical and Chemical Characteristics of Noble Metal Nanostructures

H. Okamoto

Hiromi Okamoto Bull. Chem. Soc. Jpn. 2013, 86, 397–413.



Composite Clusters Open Access Award Accounts



Study on Electronic Properties of Composite Clusters toward Nanoscale Functional Advanced Materials

Atsushi Nakajima Bull. Chem. Soc. Jpn. **2013**, 86, 414–437.



Au Nanoparticles Open Access Selected Papers



M. Kanehara

Electroconductive π-Junction Au Nanoparticles

Masayuki Kanehara; Jun Takeya; Takafumi Uemura; Hideyuki Murata; Kazuo Takimiya; Hikaru Sekine; Toshiharu Teranishi Bull. Chem. Soc. Jpn. **2012**, 85, 957–961.

Size-Controlled Au Clusters

Open Access Award Accounts



T. Tsukuda

Toward an Atomic-Level Understanding of Size-Specific Properties of Protected and Stabilized Gold Clusters

Tatsuya Tsukuda Bull. Chem. Soc. Jpn. **2012**, 85, 151–168. Molecular Self-Assembly



doi: 10.1246/bcsj.20110227



Awaru Accourt

doi: 10.1246/bcsj.20120268

Nanotubes

Solubilized S	WNT Open Access BCSJ Award Article	doi: 10.1246/bcsj.20120116
N. Nakashima	Effect of Charge of a Matrix Polymer on the Electronic States of Single-Walled Carbon Nanotubes Yasuhiko Hirana; Yasuro Niidome; Naotoshi Nakashima Bull. Chem. Soc. Jpn. 2012, 85, 1262–1267.	$ \begin{array}{c} 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\$
Graphitized	SWNT Open Access Editor's Choice	doi: 10.1246/cl.2012.871
	CVD Synthesis of Highly Graphitized Single-walled Carbon Nanotubes Using Nitrogen-pretreated Fe–Mo/MgO Catalys	St N2 RT→950'C.14 min CH4+H2 950'C.30 min
S. Gokhale	Gaurav Patil; Chetan Sarode; Rahul Patil; Suresh Gokhale	Plain N2-Pretreated Long-length, highly Fe-Mo/MgO Fe-Mo/MgO graphitized SWNTs

Chem. Lett. 2012, 41, 871-873.

Letter TiO₂ Nanotube



K. Nakata

Fabrication and Photocatalytic Properties of TiO₂ Nanotube Arrays Modified with Phosphate

Kazuva Nakata; Baoshun Liu; Yosuke Ishikawa; Munetoshi Sakai; Hidenori Saito; Tsuvoshi Ochiai; Hideki Sakai; Taketoshi Murakami; Masahiko Abe; Katsuhiko Takagi; Akira Fujishima Chem. Lett. 2011, 40, 1107-1109.

Mesoporous Materials

Silica Film Selected Papers



K. Kuroda

Formation of Au Nanostructure by **Electrodeposition in a Mesoporous Silica Film** with Interconnected Cage-Type Mesopores

Yosuke Kanno; Kazuyuki Kuroda Bull. Chem. Soc. Jpn. 2013, 86, 583-585.

Open Access Accounts Nanoarchitectonics



K. Ariga

Nanoarchitectonics for Mesoporous Materials

Katsuhiko Ariga; Ajayan Vinu; Yusuke Yamauchi; Qingmin Ji; Jonathan P. Hill Bull. Chem. Soc. Jpn. 2012, 85, 1-32.



doi: 10.1246/bcsj.20110162



doi: 10.1246/cl.2011.1107



- 2 -



Supramolecules

Nanospace **Highlight Review**

> Elaborate Metallosupramolecular Architectures through Desymmetrization Self-assembly of Symmetric Building Blocks

Takashi Nakamura; Hitoshi Ube; Mitsuhiko Shionoya Chem. Lett. 2013, 42, 328-334.



Bioinspired Materials Open Access Award Accounts

M. Shionoya

Masato Ikeda Bull. Chem. Soc. Jpn. 2013, 86, 10-24.

M. Ikeda

Bioinspired Supramolecular Materials

Bio-inspired Supramolecular Materials

Metal-Organic Frameworks (MOF)

Entangled Porous Frameworks Highlight Review



Control over Flexibility of Entangled Porous Coordination Frameworks by Molecular and Mesoscopic Chemistries

S. Kitagawa

Shuhei Furukawa; Yoko Sakata; Susumu Kitagawa Chem. Lett. 2013, 42, 570-576.



Organic FET

Single-Crystal Transistors

Open Access BCSJ Award Article



T. Yasuda

Organic Single-Crystal Transistors Based on π -Extended Heteroheptacene Microribbons

Yu Seok Yang; Takuma Yasuda; Chihaya Adachi Bull. Chem. Soc. Jpn. 2012, 85, 1186-1191.





-3 -

doi: 10.1246/bcsj.20120178

doi: 10.1246/cl.130357

-H Bond Activation

Cu-Rh Redox Catalysis **Highlight Review**

Letter



S. Chiba

Cu-Rh Redox Relay Catalysts for Synthesis of Azaheterocycles via

C-H Functionalization

Shunsuke Chiba Chem. Lett. 2012, 41, 1554-1559.



doi: 10.1246/cl.2011.1165

doi: 10.1246/cl.2012.1554



Ru Catalysis

Ruthenium-catalyzed Oxidative Alkenylation of Arenes via Regioselective C-H Bond Cleavage Directed by a Nitrogen-containing Group

M. Miura

Yuto Hashimoto; Takumi Ueyama; Tatsuya Fukutani; Koji Hirano; Tetsuya Satoh; **Masahiro Miura** Chem. Lett. 2011, 40, 1165-1166.





Pd Catalysis

Oxidative C-H/C-H Coupling of Azine and Indole/Pyrrole Nuclei: Palladium Catalysis and Synthesis of Eudistomin U

K. Itami

Atsushi D. Yamaguchi; Debashis Mandal; Junichiro Yamaguchi; Kenichiro Itami Chem. Lett. 2011, 40, 555-557.

Open Access Editor's Choice







doi: 10.1246/cl.2011.555

Cross Coupling

Suzuki Coupling Open Access Highlight Review	doi: 10.1246/cl.2011.894
Cross-coupling Reactions of R-B Organoboranes: An Easy Method for C-C Bonding A. Suzuki Akira Suzuki; Yasunori Yamamoto Chem. Lett. 2011, 40, 894–901. R-X	$ \begin{array}{c c} & & & \\ $

Fe Catalysis Open Access Letter



Kumada-Tamao-Corriu Coupling of Alkyl Halides Catalyzed by an **Iron-Bisphosphine Complex**

M. Nakamura Takuji Hatakeyama; Yu-ichi Fujiwara; Yoshihiro Okada: Takuma Itoh: Toru Hashimoto: Shintaro Kawamura; Kazuki Ogata; Hikaru Takaya; Masaharu Nakamura Chem. Lett. 2011, 40, 1030-1032.

R-X	<i>~</i> ∼×	R X	×
			doi: 10.1

cat. [FeCl2(SciOPP)] (0.5-3.0 mol%)

THF, 25-40 °C

slow addition

Alkyl-X + ArMgBr

X = Cl. Br. I



246/cl.2011.1030

Efficient Synthesis

1,3-Dipolar Cycloaddition Highlight Review



1,3-Dipolar Cycloaddition-based Synthesis of Diverse Heterocyclic Scaffolds

Wei Zhang Chem. Lett. 2013, 42, 676-681.



Alkyl-Ar

74–98% vield

10 examples

-C Bond Activation

Open Access Award Accounts Ni/Lewis Acid Catalysis



Nickel/Lewis Acid-Catalyzed Carbocyanation of Unsaturated Compounds

Yoshiaki Nakao Bull. Chem. Soc. Jpn. 2012, 85, 731-745.



CSJ Journal Report

Asymmetric Catalysis

C-C Bond-Forming Reactions Selected Papers



Asymmetric Autocatalysis

Stable Axial Chirality in Metal Complexes Bearing 4,4'-Substituted BIPHEPs: Application to Catalytic Asymmetric Carbon–Carbon

K. Mikami Bond-Forming Reactions

Kohsuke Aikawa; Yoshitaka Miyazaki; Koichi Mikami Bull. Chem. Soc. Jpn. 2012, 85, 201–208.

Open Access Award Accounts



doi: 10.1246/bcsj.20110309

doi: 10.1246/bcsj.20110120

Asymmetric Induction Arising from Enantiomerically Enriched Carbon-13 Isotopomers and Highly Sensitive Chiral Discrimination by сно. Chiral Carbon Isotonome K. Soai Asymmetric Autocatalysis Asymmetric Autocatalysis with Amplification of ee t-Bu t-Bi + *i*-Pr₂Zn Tsuneomi Kawasaki; Kenso Soai Bull. Chem. Soc. Jpn. 2011, 84, 879-892. **Highlight Review** Asymmetric Isomerization doi: 10.1246/cl.2011.341 Platinum Metals in the Catalytic Asymmetric Isomerization of Allylic Alcohols Ir H/R H/R⁴ Luca Mantilli; Clément Mazet C. Mazet Chem. Lett. 2011, 40, 341-344. ³ Rι

M/NH Bifunctional Catalysis Open Access Award Accounts



Chemistry of *Concerto* Molecular Catalysis Based on the Metal/NH Bifunctionality

Takao Ikariya Bull. Chem. Soc. Jpn. **2011**, 84, 1–16.



🍪 The Chemical Society of Japan

http://www.csj.jp/journals/chem-lett http://www.csj.jp/journals/bcsj

