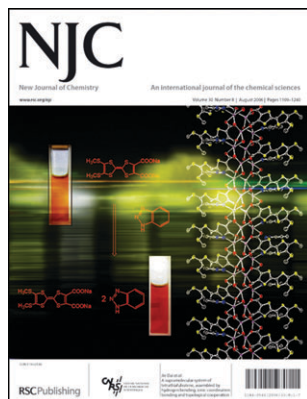


IN THIS ISSUE

ISSN 1144-0546 CODEN NJCHES 30(8) 1109-1240 (2006)



Cover

See Jie Dai *et al.*, p. 1140.

A one dimensional supramolecular compound is selectively formed by reacting a tetrathiafulvalene dicarboxylate salt with benzotriazole molecules.

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CHEMICAL SCIENCE

C57

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August 2006/Volume 3/Issue 8

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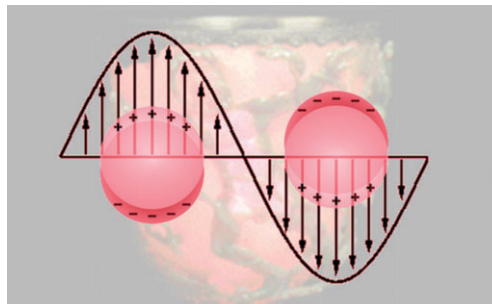
PERSPECTIVE

1121

The plasmon band in noble metal nanoparticles: an introduction to theory and applications

Audrey Moores and Frédéric Goettmann

We present a comprehensible overview of the fundamentals of the theories explaining the plasmon band of noble metal nanoparticles alongside to a brief review of the most recent applications in the field.



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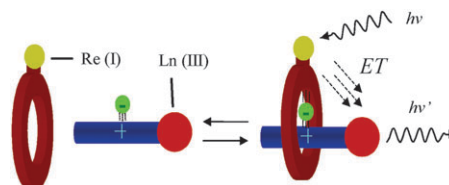
LETTERS

1133

Sensitised near infrared emission from lanthanides *via* anion-templated assembly of d–f heteronuclear [2]pseudorotaxanes

Mark R. Sambrook, David Curiel, Elizabeth J. Hayes, Paul D. Beer,* Simon J. A. Pope and Stephen Faulkner*

Anion-templated interpenetration of a lanthanide stoppered thread into a transition metal sensitiser containing macrocycle is signalled *via* sensitised near-infrared (NIR) lanthanide luminescence.

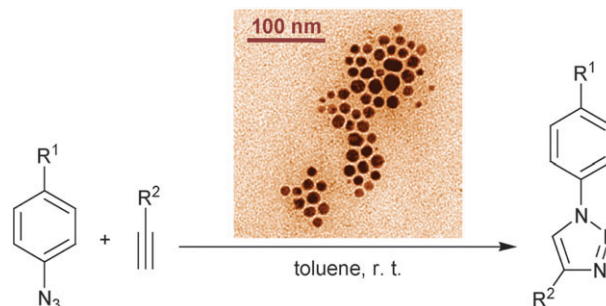


1137

Cu/Cu-oxide nanoparticles as catalyst in the “click” azide–alkyne cycloaddition

Giorgio Molteni, Claudia L. Bianchi, Giorgio Marinoni, Nadia Santo and Alessandro Ponti*

Mixed Cu/Cu-oxide nanoparticles are an effective catalyst for the “click” 1,3-dipolar cycloaddition between azides and terminal alkynes, featuring short reaction times, soft reaction conditions and full regioselectivity.



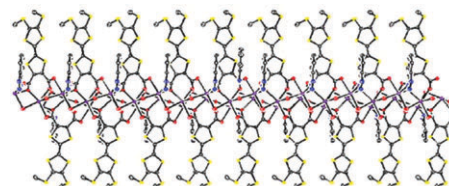
PAPERS

1140

A supramolecular system of tetrathiafulvalene, assembled by hydrogen bonding, ionic coordination bonding and topological cooperation

Qin-Yu Zhu, Hai-Hong Lin, Jie Dai,* Guo-Qing Bian, Yong Zhang and Wen Lu

Solid state and solution chemistry of a supramolecular system, a TTF dicarboxylate salt reacting with benzotriazole molecules, have been studied. Host–guest responses and topological selectivity are found for the system by means of electronic spectra and cyclic voltammetry.

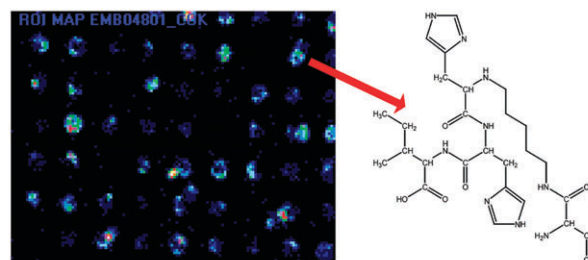


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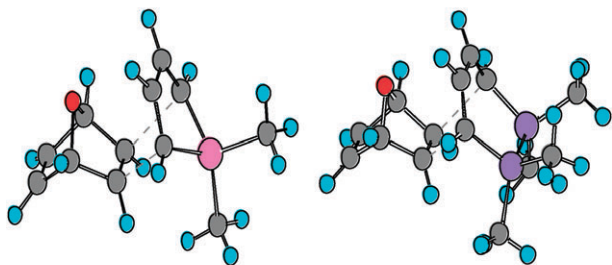
An ultra high throughput, double combinatorial screening method of peptide–metal binding

Edel M. Minogue, George J. Havrilla, Tammy P. Taylor, Benjamin P. Warner and Anthony K. Burrell*

Micro X-ray fluorescence has proven to be a powerful tool for the rapid identification of peptide ligands for metals in a high throughput competitive screen.



1149

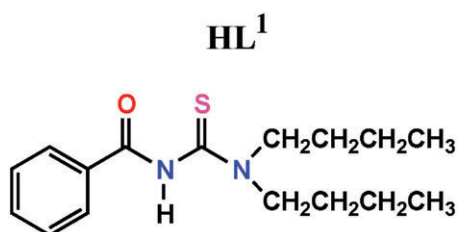


Computational study on reactivity of cyclic organometallic dienes containing silicon, germanium and tin

Davor Margetić* and Mirjana Eckert-Maksić*

Stereospecificity of Diels–Alder reactions of a series of penta- and hexacyclic metalloles (Si, Ge, Sn) and 7-oxanorbornadiene is rationalized by calculating activation energies for the related model reactions using the B3LYP/LANL2DZ method.

1155

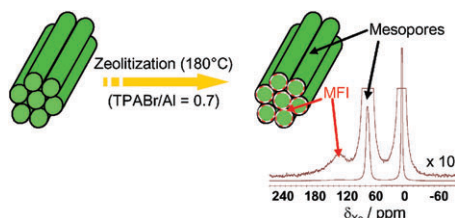


Competitive bulk liquid membrane transport and solvent extraction of some transition and post-transition metal ions using acylthiourea ligands as ionophores

Michael M. Habtu, Susan A. Bourne, Klaus R. Koch and Robert C. Luckay*

Competitive transport experiments have been carried out using acylthiourea ligands. Transport selectivity was observed for Ag(I) in all but one case. An X-ray diffraction study of the Ag(I) complex of *N,N*-dibutyl-*N'*-benzoylthiourea is reported.

1163

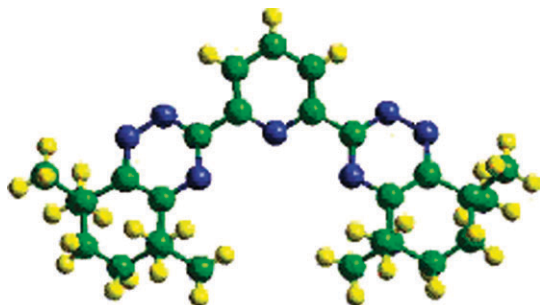


Monitoring the crystallization process of a zeolite structure on SBA-15 mesopore walls

Sami Habib, Franck Launay,* Marie-Anne Springuel-Huet, Flavien Guenneau, Virginie Semmer-Herlédan, Nataša Novak Tušar, Venčeslav Kaučič and Antoine Gédéon*

Partial conversion of the amorphous walls of Al-SBA-15 into H-ZSM-5 deposits was performed and the pore hierarchy was evidenced by HP ¹²⁹Xe NMR.

1171



New bis(triazinyl) pyridines for selective extraction of americium(III)

Michael J. Hudson,* Carole E. Boucher, Damien Braekers, Jean F. Desreux, Michael G. B. Drew, Mark R. St J. Foreman, Laurence M. Harwood, Clément Hill, Charles Madic, Frank Marken and Tristan G. A. Youngs

New hydrophobic, tridentate nitrogen heterocyclic reagents are able to give significantly enhanced separations of americium(III) from an excess of europium(III) in nitric acid.

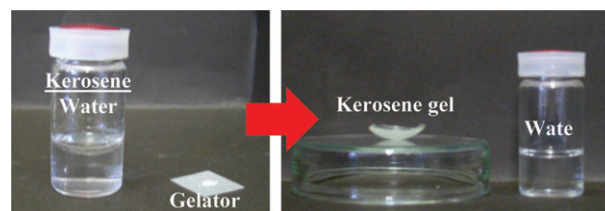
PAPERS

1184

Powerful low-molecular-weight gelators based on L-valine and L-isoleucine with various terminal groups

Masahiro Suzuki,* Teruaki Sato, Hirofusa Shirai and Kenji Hanabusa

Novel organogelators based on L-valine and L-isoleucine derivatives with various terminal groups have been prepared and their organogelation properties have been examined. Some of the compounds function as powerful organogelators that are useful for selective gelation of oils and fuels from oil/water mixtures.

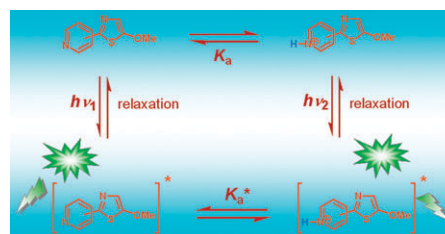


1192

A new series of fluorescent 5-methoxy-2-pyridylthiazoles with a pH-sensitive dual-emission

Ming-Hua Zheng, Jing-Yi Jin, Wei Sun and Chun-Hua Yan*

A new series of fluorophores, 5-methoxy-2-(2-, 3- or 4-pyridyl)thiazoles (2-, 3- or 4-MPT, respectively), and their photophysical properties are reported with 2- and 4-MPT displaying a pH-sensitive fluorescence with a dual-emission in an aqueous system from pH 2 to 6.

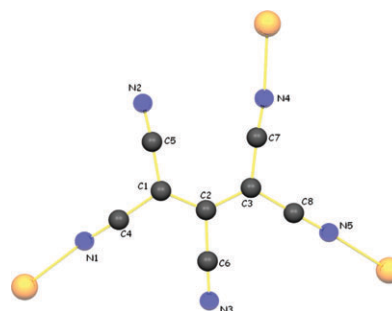


1197

Syntheses, structural characterisation and magnetic properties of Fe(II) and Mn(II) compounds with the pentacyanopropenido ligand; structural characterisation of a substituted pyrazolo[1,5-a]pyrimidine

Emeric Lefebvre, Françoise Conan,* Nathalie Cosquer, Jean-Michel Kerbaol, Mathieu Marchivie, Jean Sala-Pala, Marek M. Kubicki, Estelle Vigier and Carlos J. Gomez Garcia

A pentacyanopropenido iron compound shows an unusual μ_3 -coordination mode.



1207

A highly selective fluorescent sensor for fluoride through ESPT signaling transduction

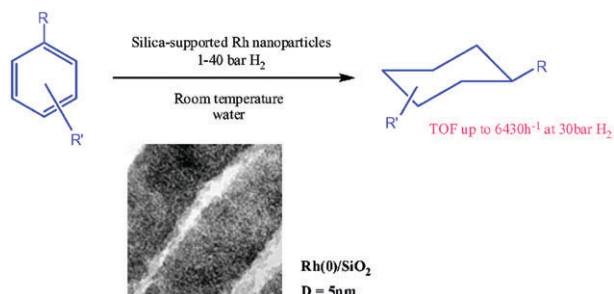
Yong-gang Zhao, Bing-guang Zhang, Chun-ying Duan,* Zhi-hua Lin and Qing-jin Meng*

Molecular clips for fluorescent sensing of fluoride are obtained and characterized by an excited-state intermolecular proton transfer mechanism with the emission bands red-shifted and enhanced. Structural characterization and spectral titrations suggest a binding–excitation–deprotonation process.



PAPERS

1214

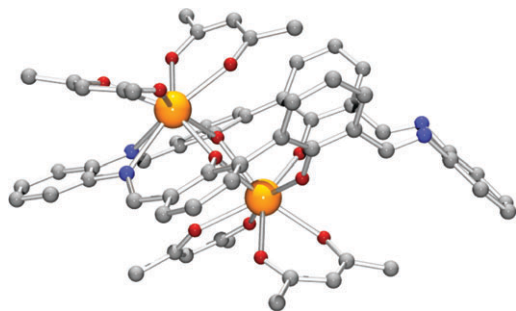


A simple and reproducible method for the synthesis of silica-supported rhodium nanoparticles and their investigation in the hydrogenation of aromatic compounds

Vincent Mévellec, Audrey Nowicki, Alain Roucoux,*
Christophe Dujardin, Pascal Granger, Edmond Payen and
Karine Philippot

A surfactant-stabilized aqueous Rh(0) colloidal suspension has been used to immobilize Rh nanoparticles on silica. Heterogeneous catalysts have been investigated for the hydrogenation of arenes.

1220

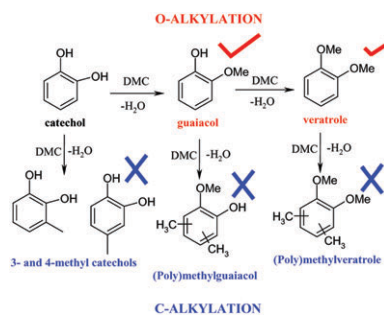


Synthesis, structure and magnetic behaviour of dinuclear uranium(IV) complexes with a 'calixsalophen' type macrocycle

Lionel Salmon,* Pierre Thuéry, Eric Rivière, Shinpei Miyamoto, Takehiko Yamato and Michel Ephritikhine

In the dinuclear compounds isolated from reactions of UCl_4 and $U(acac)_4$ with the 'calixsalophen' macrocycle H_4L^1 , $[U_2L^1Cl_4]$ and $[U_2L^1(acac)_4]$, the uranium atoms are found, respectively, in the two N_2O_2 or in the O_4 and N_2O_2 sites of the tricompartmental ligand.

1228



Catechol *O*-methylation with dimethyl carbonate over different acid–base catalysts

Rafael Luque, Juan Manuel Campelo,*
Tomas David Conesa, Diego Luna, Jose Maria Marinas
and Antonio Angel Romero

The gas-phase catechol *O*-alkylation reaction was performed over different micro-mesoporous materials in order to obtain high added value chemicals and intermediates for the fine chemicals industry.

AUTHOR INDEX

- Beer, Paul D., 1133
 Bian, Guo-Qing, 1140
 Bianchi, Claudia L., 1137
 Boucher, Carole E., 1171
 Bourne, Susan A., 1155
 Braekers, Damien, 1171
 Burrell, Anthony K., 1145
 Campelo, Juan Manuel, 1228
 Conan, Françoise, 1197
 Conesa, Tomas David, 1228
 Cosquer, Nathalie, 1197
 Curiel, David, 1133
 Dai, Jie, 1140
 Desreux, Jean F., 1171
 Drew, Michael G. B., 1171
 Duan, Chun-ying, 1207
 Dujardin, Christophe, 1214
 Eckert-Maksić, Mirjana, 1149
 Ephritikhine, Michel, 1220
 Faulkner, Stephen, 1133
 Foreman, Mark R. St J., 1171
 Gédéon, Antoine, 1163
 Goettmann, Frédéric, 1121
 Gomez Garcia, Carlos J., 1197
 Granger, Pascal, 1214
 Guenneau, Flavien, 1163
 Habib, Sami, 1163
 Habtu, Michael M., 1155
 Hanabusa, Kenji, 1184
 Harwood, Laurence M., 1171
 Havrilla, George J., 1145
 Hayes, Elizabeth J., 1133
 Hill, Clément, 1171
 Hudson, Michael J., 1171
 Jin, Jing-Yi, 1192
 Kaučič, Venčeslav, 1163
 Kerbaol, Jean-Michel, 1197
 Koch, Klaus R., 1155
 Kubicki, Marek M., 1197
 Launay, Franck, 1163
 Lefebvre, Emeric, 1197
 Lin, Hai-Hong, 1140
 Lin, Zhi-hua, 1207
 Lu, Wen, 1140
 Luckay, Robert C., 1155
 Luna, Diego, 1228
 Luque, Rafael, 1228
 Madic, Charles, 1171
 Marchivie, Mathieu, 1197
 Margetić, Davor, 1149
 Marinas, Jose Maria, 1228
 Marinoni, Giorgio, 1137
 Marken, Frank, 1171
 Meng, Qing-jin, 1207
 Mévellec, Vincent, 1214
 Minogue, Edel M., 1145
 Miyamoto, Shinpei, 1220
 Molteni, Giorgio, 1137
 Moores, Audrey, 1121
 Novak Tušar, Nataša, 1163
 Nowicki, Audrey, 1214
 Payen, Edmond, 1214
 Philippot, Karine, 1214
 Ponti, Alessandro, 1137
 Pope, Simon J. A., 1133
 Rivière, Eric, 1220
 Romero, Antonio Angel, 1228
 Roucoux, Alain, 1214
 Sala-Pala, Jean, 1197
 Salmon, Lionel, 1220
 Sambrook, Mark R., 1133
 Santo, Nadia, 1137
 Sato, Teruaki, 1184
 Semmer-Herlédan, Virginie, 1163
 Shirai, Hirofusa, 1184
 Springuel-Huet, Marie-Anne, 1163
 Sun, Wei, 1192
 Suzuki, Masahiro, 1184
 Taylor, Tammy P., 1145
 Thuéry, Pierre, 1220
 Vigier, Estelle, 1197
 Warner, Benjamin P., 1145
 Yamato, Takehiko, 1220
 Yan, Chun-Hua, 1192
 Youngs, Tristan G. A., 1171
 Zhang, Bing-guang, 1207
 Zhang, Yong, 1140
 Zhao, Yong-gang, 1207
 Zheng, Ming-Hua, 1192
 Zhu, Qin-Yu, 1140

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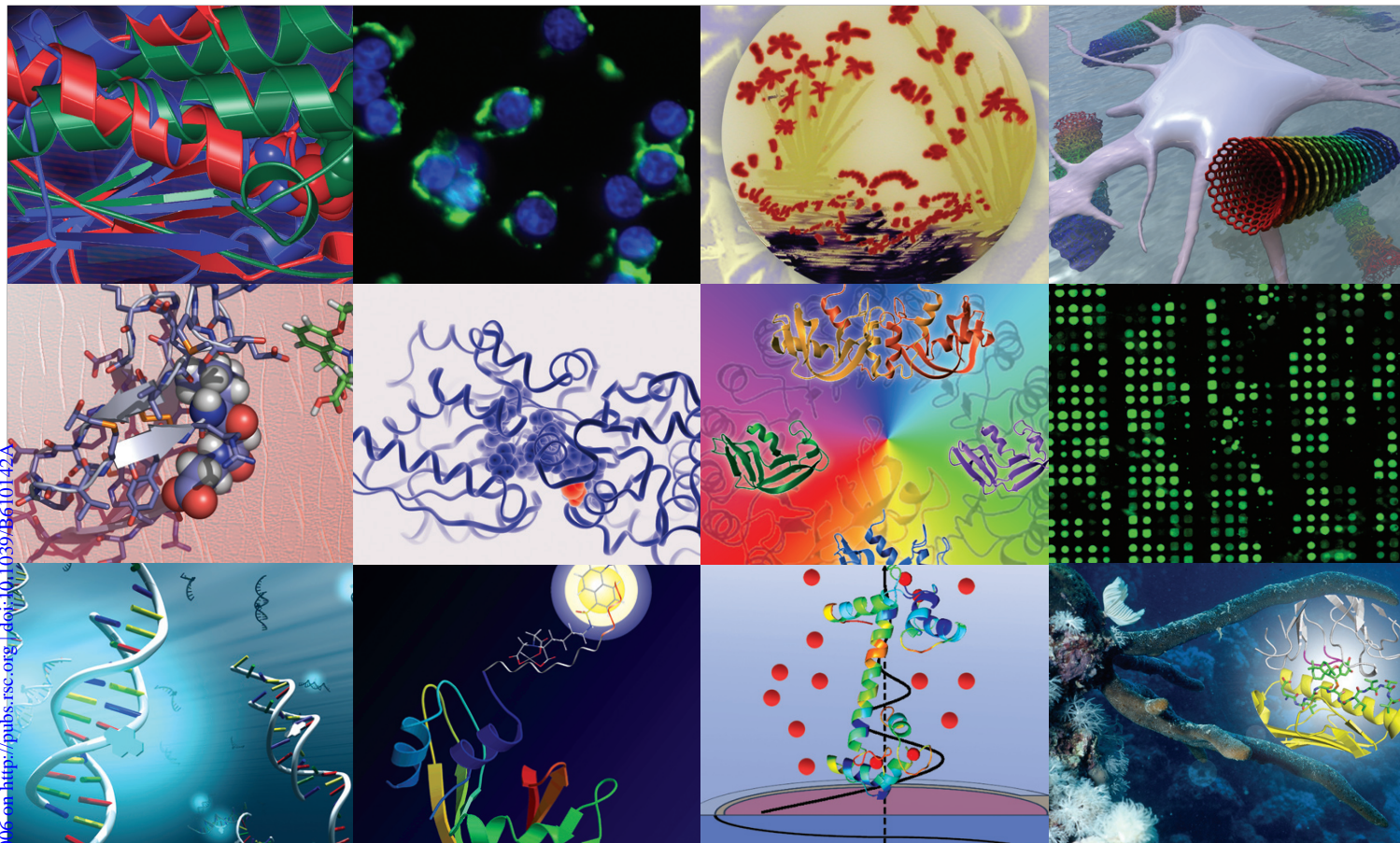
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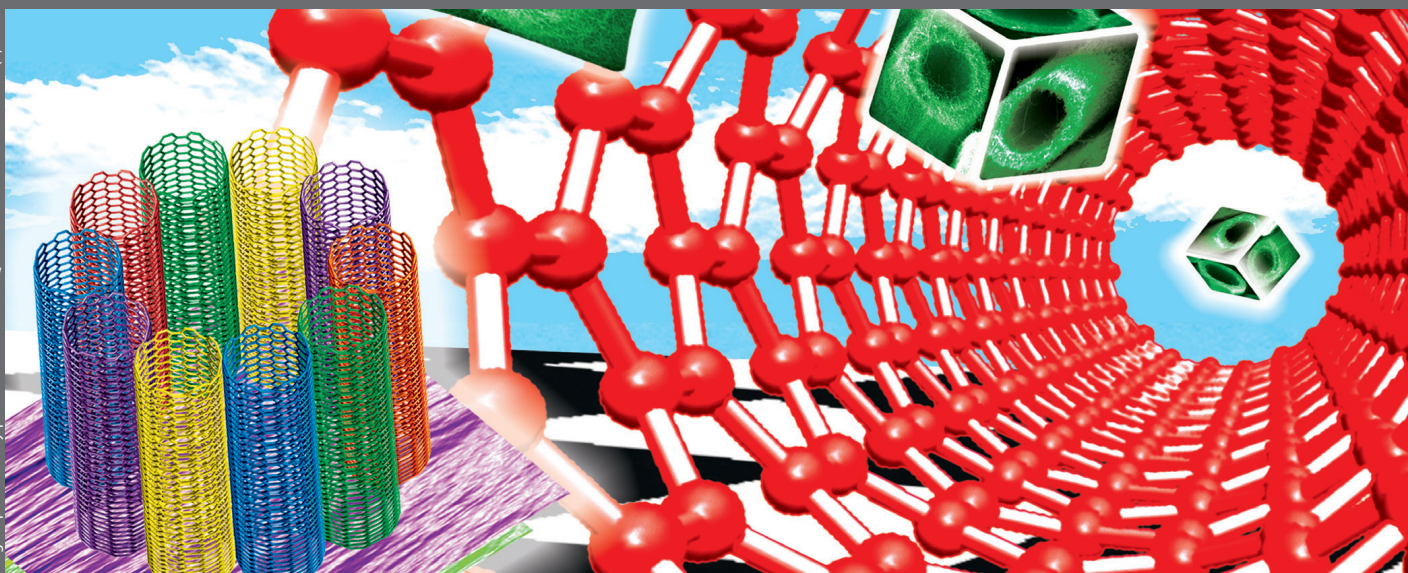


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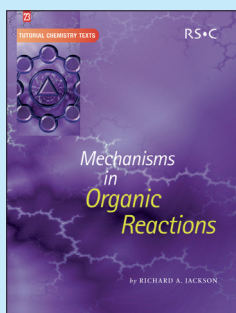
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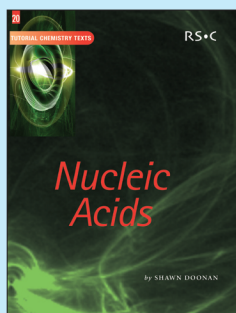


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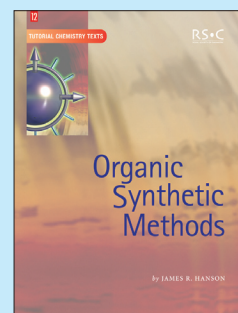


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