

AUSTRALIAN JOURNAL OF  
**CHEMISTRY**  
AN INTERNATIONAL JOURNAL FOR CHEMICAL SCIENCE

Volume 65 Number 9 2012

**CONTENTS**

**RESEARCH FRONT: 2nd Molecular Materials Meeting (M3@Singapore)**

**Guest Editor: Curt Wentrup**

**Foreword**

The 2nd Molecular Materials Meeting (M3@Singapore)

*Y. Zong, T. S. A. Hor* 1191

**Highlight**

Conducting Material-incorporated Electrorheological Fluids: Core-shell Structured Spheres

*Y. D. Liu, K. Zhang, W. L. Zhang, H. J. Choi* 1195

**Reviews**

Heterocyclic-Functionalized Organic Dyes for Dye-Sensitized Solar Cells: Tuning Solar Cell Performance by Structural Modification

*Q. Li, Z. Jiang, J. Qin, Z. Li* 1203

Carbon Nanotube-Based Materials for Fuel Cell Applications

*J. Liu, L. Lai, N. G. Sahoo, W. Zhou, Z. Shen, S. H. Chan* 1213

**Full Papers**

Ag Nanoparticle-Poly(acrylic acid) Composite Film with Dynamic Plasmonic Properties

*V. Chegel, A. Lopatynskyi, S. Ishihara, J. P. Hill, K. Ariga* 1223

Carbazole-Functionalised Poly(1-phenyl-1-alkyne)s: Synthesis, Light Emission, and Fluorescent Photopatterning

*J. W. Y. Lam, A. Qin, Y. Dong, J. Liu, C. K. W. Jim, Y. Hong, H. S. Kwok, B. Z. Tang* 1228

Gold/Palladium Bimetallic Alloy Nanoclusters Stabilized by Chitosan as Highly Efficient and Selective Catalysts for Homocoupling of Arylboronic Acid

*O. Sophiphun, J. Wittayakun, R. N. Dhital, S. Haesuwannakij, A. Murugadoss, H. Sakurai* 1238

Pyridine-Incorporated Dihexylquaterthiophene: A Novel Blue Emitter for Organic Light Emitting Diodes (OLEDs)

*P. Sonar, S. G. Santamaria, T. T. Lin, A. Sellinger, H. Bolink* 1244

**Communications**

Structure–Property Relationships Based on Phenyl-1*H*-Pyrrole End-Capped Thiophene Semiconductors

*Y. Liu, J. Zhang, Y. Liu, G. Yu, Z. Ge* 1252

Electroluminescence of Hybrid Self-Organised Fibres Incorporating CdTe Quantum Dots

*M. Ando, C. Hosokawa, P. Yang, N. Murase* 1257

**RESEARCH FRONT: International Collaborative and Cooperative Chemistry Symposium 2011**

**Guest Editors: Craig Williams and Curt Wentrup**

**Foreword**

2nd International Collaborative and Cooperative Chemistry Symposium

*C. M. Williams* 1260

**Full Papers**

Regioselective Addition of 1,3-Dicarbonyl Dianions to Carbonyl Compounds: One Pot Lactonization and Ketalization of  $\delta$ -Hydroxy- $\beta$ -keto Esters to Protected Pyrone Derivatives

*M. K. Ghorai, S. Halder, S. Samanta* 1262

Transcription Inhibition by Organometallic Ruthenium–Arene Anticancer Complexes in Live Mammalian Cells

*A. Astarina, M. J. Chow, W. H. Ang* 1271

New Synthesis of Dibenzofulvenes by Palladium-Catalyzed Double Cross-Coupling Reactions

*M. Shimizu, I. Nagao, S.-i. Kiyomoto, T. Hiyama* 1277

Unprecedented Mn(II)–Phosphate 3D Coordination Polymer with Novel *pkb1* Topological Network Showing Spin-Canted Antiferromagnetism

*M. Ahmad, M. K. Sharma, R. Singh, J. Mrozninski, P. K. Bharadwaj* 1285

Fluorescence, Phosphorescence, and Delayed Fluorescence of Benzil in Imidazolium Ionic Liquids

*D. C. Khara, A. Samanta* 1291

Magnetic Dipole Origins of the  $^3A_{2g} \rightarrow ^3T_{2g}$  Transition in Ni(II) Doped MgO

*M. J. Riley, J. Hall, E. R. Krausz* 1298

Static and Dynamic Aspects of Supramolecular Interactions of Coumarin 153 and Fluorescein with Bovine Serum Albumin

*R. Yadav, S. Das, P. Sen* 1305

Structural Insights into the Active Site of Human Sodium Dependent Glucose Co-Transporter 2: Homology Modelling, Molecular Docking, and 3D-QSAR Studies

*S. Nakka, L. Guruprasad* 1314

**REGULAR PAPERS****Review**

Sixty Years Young: The Diverse Biological Activities of Metal Polypyridyl Complexes Pioneered by Francis P. Dwyer  
*N. L. Kilah, E. Meggers* **1325**

**Full Papers**

The In Vitro and In Vivo Antitumour Activities of Nitrosyl Ruthenium Amine Complexes

*R. Z. Osti, F. A. Serrano, T. Paschoalin, M. H. S. Massaoka, L. R. Travassos, D. R. Truzzi,  
E. G. Rodrigues, D. W. Franco* **1333**

Uniform Chrysanthemum-Like Bi<sub>2</sub>S<sub>3</sub> Microspheres for Dye-Sensitised Solar Cells

*J. Wang, Z. Liu, S. Yuan, L. Liu, Z. Zhou, W. Chen* **1342**

Synthesis and SAR of a Library of Cell-Permeable Biotin-R<sub>8</sub>ERY\* Peptidomimetics

Inhibiting  $\alpha_4\beta_7$  Integrin Mediated Adhesion of TK-1 Cells to MAdCAM-1-Fc

*S. Papst, A. F. M. Noisier, M. A. Brimble, Y. Yang, Y.-C. Chan, G. W. Krissansen* **1349**