

AUSTRALIAN JOURNAL OF
CHEMISTRY
AN INTERNATIONAL JOURNAL FOR CHEMICAL SCIENCE

Volume 69 Number 4 2016

CONTENTS

RESEARCH FRONT: 5th Molecular Materials Meeting (M3) @ Singapore

Guest Editors: Curt Wentrup and Yun Zong

Foreword

The 5th Molecular Materials Meeting (M3) @ Singapore

Y. Zong, T. S. A. Hor 361

Full Papers

Cationic Micelles Based on Polyhedral Oligomeric Silsesquioxanes for Enhanced Gene Transfection

C. K. Liu, Q. Dou, S. S. Liow, J. N. Kumar, X. J. Loh 363

Hybrid 1,2,3-Triazole Supported Cu^{II} Complexes: Tuning Assembly and Weak Interaction-Driven Crystal Growth

S.-Q. Bai, L. Jiang, D. J. Young, T. S. A. Hor 372

Structural Basis for the Structure–Activity Behaviour of Oxaliplatin and its Enantiomeric Analogues: A Molecular Dynamics Study of Platinum-DNA Intrastrand Crosslink Adducts

J. Yang, J. Chen, Z. Li 379

An Injectable Double-Network Hydrogel for Cell Encapsulation

P. L. Chee, L. Lakshmanan, S. Jiang, H. Ye, D. Kai, X. J. Loh 388

Enhancement of Oxidation of Formic Acid in Acid Medium on Zirconia-Supported Phosphotungstate-Decorated Noble Metal (Pd, Pt) Nanoparticles

I. A. Rutkowska 394

Diketopyrrolopyrrole-Based Low-Bandgap Conjugated Polymers with Siloxane Side Chains for Electrochromic Applications

Z. Shi, W. T. Neo, H. Zhou, J. Xu 403

Polyaniline-Supported Bacterial Biofilms as Active Matrices for Platinum Nanoparticles: Enhancement of Electroreduction of Carbon Dioxide

E. Seta, W. A. Lotowska, I. A. Rutkowska, A. Wadas, A. Raczkowska, M. Nieckarz, K. Brzostek, P. J. Kulesza 411

Efficient Synthesis of All-Aryl Phenazasilines for Optoelectronic Applications

S. Xu, H. Li, Y. Tang, R. Chen, X. Xie, X. Zhou, G. Xing, W. Huang 419

Au-Pd Bimetallic Nanoparticle Electrodes for Direct Electroreduction of Hexavalent Chromium Complexes

R. S. Moakhar, M. B. Hariri, A. Kushwaha, A. Dolati, M. Ghorbani, G. K. L. Goh 423

Empirical Formulae in Correlating Droplet Shape and Contact Angle

T. I. Wong, H. Wang, F. Wang, S. L. Sin, C. G. Quan, S. J. Wang, X. Zhou 431

REGULAR PAPERS

Full Papers

Fullerene–Pyrrolidine Biferrocene Donor–Acceptor Triads: Synthesis and Effects of Fullerene[60] on the Electronic Communication of the Two Ferrocene Units in Biferrocene

Z. Wu, M. Jiang 440

Three 3d-4f Tetranuclear Complexes Based on 2,3,5-Trichlorobenzoic Acid: Syntheses, Structures, and Magnetic Properties

Y. Zhang, J.-M. Zheng 446

Lactic Acid Determination in Human Plasma Using Ultrasound-Assisted Emulsification Microextraction Followed by Gas Chromatography

P. Shahdousti, R. Shojaee, M. Aghamohammadi, B. Harooni 451

Thermal and Spectral Analysis of Novel Amide-Tethered Polymers from Poly(allylamine)

P. N. Grenga, M. J. Nethercott, A. E. Mateo, M. Patenaude, T. Hoare, D. P. Weliky, R. Prieser 458

First Principle Study of Electronic and Non-Linear Optical (NLO) Properties of Triphenylamine Dyes: Interactive Design Computation of New NLO Compounds

M. R. S. A. Janjua, Z. H. Yamani, S. Jamil, A. Mahmood, I. Ahmad, M. Haroon, M. H. Tahir, Z. Yang, S. Pan 467

Label-Free and Sensitive Detection of *BRCA1* and *TB4* DNA Sequences with Water-Soluble Cationic Polythiophenes

S. Zhou, H. Ling, Y. Ma, Y. Zhou, W. Du, M. Cui, Y. Xia, L. Yan, H. Yao, Z. Qi 473

Self-Generated Macrochannel-Structure TiO₂/g-C₃N₄ with High Photocatalytic Activity

G. Dai, T. Wang, S. Liu, Y. Liang, W. Xu 478