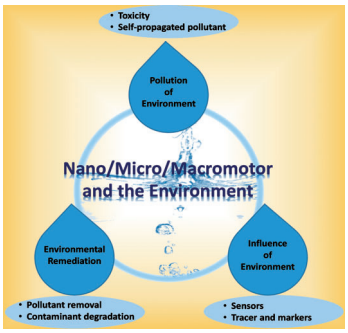
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Nano/Micro/Macromotors

J. G. S. Moo, M. Pumera*

Chemical Energy Powered Nano/Micro/Macromotors and the Environment

First response: Use of synthetic nano/micro/macromotors has demonstrated potential in environmental remediation, both in pollutant removal and contaminant degradation, owing to motion-induced mixing. At the same time, the chemical environment exerts influence on the locomotion of the motors, allowing these sensitized self-powered devices to be deployed as sensors and first responders to chemical leakage.



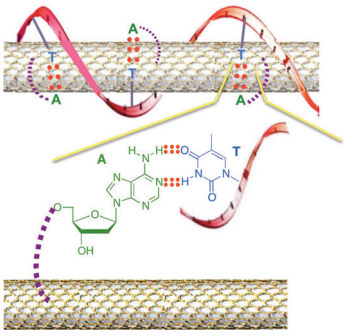
Chem. Eur. J.
DOI: **10.1002/chem.201405011**

Nanotechnology

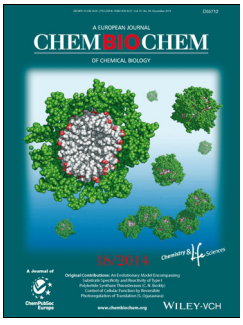
J. R. Hwu,* M. Kapoor, R.-Y. Li, Y.-C. Lin, J.-C. Horng, S.-C. Tsay

Synthesis of Nucleobase-Functionalized Carbon Nanotubes and Their Hybridization with Single-Stranded DNA

Wrapped up: Single-stranded DNA (ssDNA) was hybridized with adenosine-functionalized single-walled carbon nanotubes (SWCNTs) and provided prominent CD peaks. Unlike the conventional very tight wrapping of nude SWCNTs by ssDNA through π–π stacking, the (poly dA)-SWCNTs **1A** were bound to ssDNA by hydrogen bonds (see picture; purple dotted line = hydrophobic/hydrophilic spacer. The ssDNA can be liberated from the resultant hybrid at 50–55 °C.



Chem. Asian J.
DOI: **10.1002/asia.201402994**

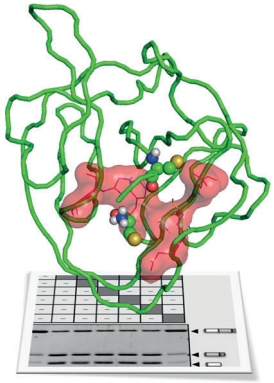


Active-Site Probe

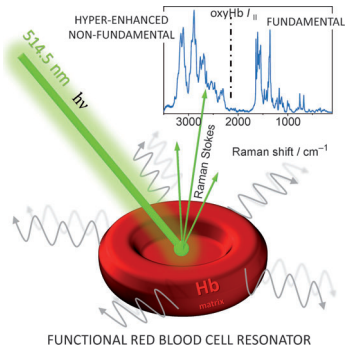
T. S. Owen, X. J. Xie, B. Laraway, G. Ngoje, C. Wang, B. P. Callahan*

Active Site Targeting of Hedgehog Precursor Protein with Phenylarsine Oxide

Lost in maturation: Hedgehog proteins, whose signaling activities are linked to multiple human cancers, undergo a cholesterol-dependent autoprocessing event that is essential for bioactivity. The trivalent arsenical compound, phenylarsine oxide, was found to inhibit this reaction irreversibly.



ChemBioChem
DOI: **10.1002/cbic.201402421**

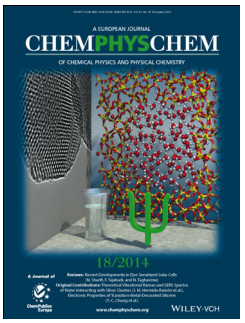


Raman Spectroscopy

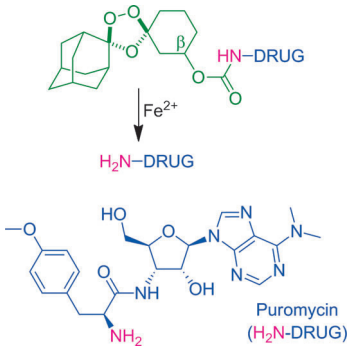
K. M. Marzec, D. Perez-Guaita, M. de Veij, D. McNaughton, M. Baranska, M. W. A. Dixon, L. Tilley, B. R. Wood*

Red Blood Cells Polarize Green Laser Light Revealing Hemoglobin's Enhanced Non-Fundamental Raman Modes

Band aid: Red blood cells and solid-state hemes give rise to intense overtone bands when excited with green laser light.



ChemPhysChem
DOI: **10.1002/cphc.201402598**



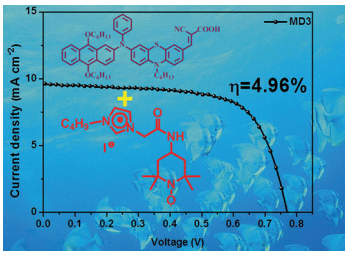
Antimalarial Drug Delivery

S. D. Fontaine, B. Spangler, J. Gut, E. M. W. Lauterwasser, P. J. Rosenthal, A. R. Renslo*

Drug Delivery to the Malaria Parasite Using an Arterolane-Like Scaffold

Let it go! Targeted drug delivery to the malaria parasite is demonstrated with next-generation 1,2,4-trioxolanes closely related to antimalarial agents arterolane and OZ439. The new systems are prepared by an improved synthetic route and exhibit superior drug-like properties compared with their progenitors. Efficient release of a small-molecule payload is demonstrated with the aminonucleoside puromycin, which becomes incorporated into the *Plasmodium falciparum* proteome when released from a competent trioxolane conjugate.

ChemMedChem
DOI: **10.1002/cmdc.201402362**

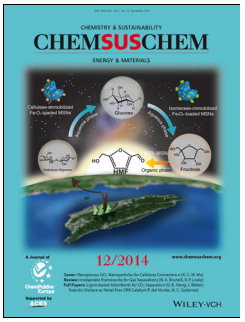


Solar Cells

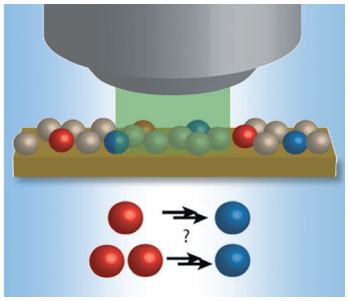
R. Y.-Y. Lin, T.-M. Chuang, F.-L. Wu, P.-Y. Chen, T.-C. Chu, J.-S. Ni, M.-S. Fan, Y.-H. Lo, K.-C. Ho,* J. T. Lin*

Anthracene/Phenothiazine π-Conjugated Sensitizers for Dye-Sensitized Solar Cells using Redox Mediator in Organic and Water-based Solvents

DSSCs get wet: Metal-free dyes containing an anthracene/phenothiazine unit in the spacer are synthesized. Aqueous dye-sensitized solar cells using these sensitizers and a dual electrolyte that comprises 2,2,6,6-tetramethylpiperidine-*N*-oxyl (TEMPO) and imidazolium iodide exhibit promising light-to-electricity conversion efficiencies and excellent V_{oc} values.



ChemSusChem
DOI: **10.1002/cssc.201403016**

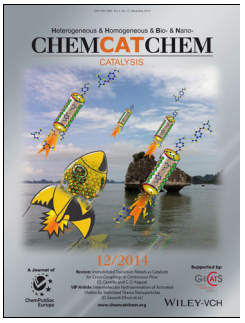


Surface Investigations

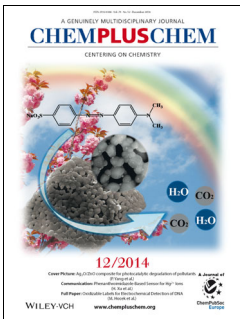
E. M. van Schrojenstein Lantman, O. L. J. Gijzeman, A. J. G. Mank, B. M. Weckhuysen*

Investigation of the Kinetics of a Surface Photocatalytic Reaction in Two Dimensions with Surface-enhanced Raman Scattering

We plough the surface and scatter: Surface-enhanced Raman spectroscopy can be used to determine the reaction kinetics of surface reactions within self-assembled monolayers. As a proof of principle we have chosen to study the photocatalytic reduction of *p*-nitrothiophenol. A study of the reaction rate and dilution effects leads to the conclusion that a dimerization must take place as one of the reaction steps.



ChemCatChem
DOI: **10.1002/cctc.201402647**

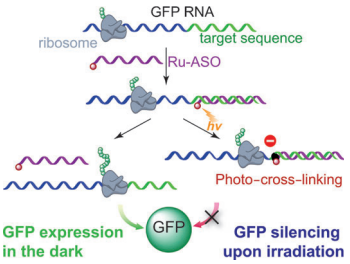


Oligonucleotides

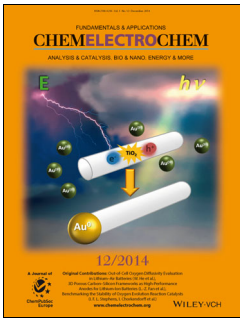
L. Marcélis, N. Van Overstraeten-Schlögel, J. Lambermont, S. Bontems, N. Spinelli, E. Defrancq, C. Moucheron, A. Kirsch-De Mesmaeker, M. Raes*

Light-Triggered Green Fluorescent Protein Silencing in Human Keratinocytes in Culture Using Antisense Oligonucleotides Coupled to a Photoreactive Ruthenium(II) Complex

Silence, please: The specific ruthenium(1,4,5,8-tetraazaphenanthrene)–antisense oligodeoxyribonucleotide (Ru(TAP)–ASO) conjugate is able to significantly reduce green fluorescent protein (GFP) expression after Ru–ASO visible excitation in treated cells (see figure).



ChemPlusChem
DOI: **10.1002/cplu.201402212**

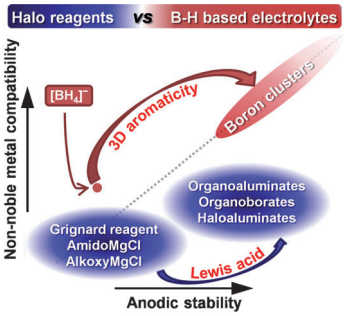


Electrolytes

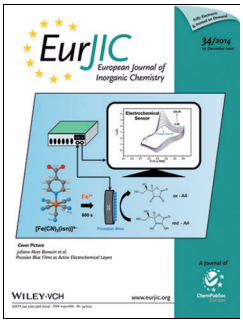
O. Tutusaus, R. Mohtadi*

Paving the Way towards Highly Stable and Practical Electrolytes for Rechargeable Magnesium Batteries

Enhancing electrolytes: A platform to design electrolytes for rechargeable Mg batteries based on the B–H motif has generated a new family of highly promising and noncorrosive electrolytes. The principles that guided the design of state-of-the-art Mg electrolytes and their properties are discussed. In addition, a bottom-up design approach based on B–H compounds is described.



ChemElectroChem
DOI: **10.1002/celc.201402207**

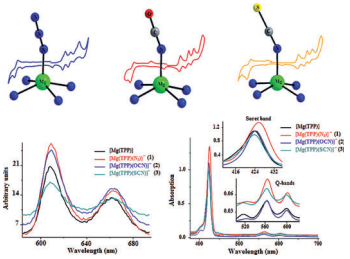


Metalloporphyrins

K. Ezzayani, Z. Denden, S. Najmudin, C. Bonifácio, E. Saint-Aman, F. Loiseau, H. Nasri*

Exploring the Effects of Axial Pseudohalide Ligands on the Photophysical and Cyclic Voltammetry Properties and Molecular Structures of Mg^{II} Tetraphenyl/porphyrin Complexes

The $[Mg(TPP)X]^-$ (TPP = tetraphenylporphyrinato; X = N_3^-, NOC^-, NCS^-) complex ions were characterized by X-ray diffraction. The effects of the nature of the axial pseudohalide ligand X on the photophysical and redox properties of these species in dichloromethane have also been studied by cyclic voltammetry, UV/Vis spectroscopy, and fluorescence spectroscopy techniques.



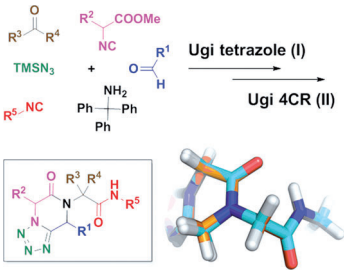
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201402546**

Multicomponent Reactions

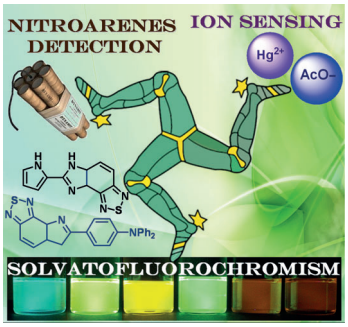
T. Zarganes-Tzitzikas, P. Patil, K. Khoury, E. Herdtweck, A. Dömling*

Concise Synthesis of Tetrazole–Ketopiperazines by Two Consecutive Ugi Reactions

A novel compound class of tetrazole–diketopiperazines is described. Two multicomponent reactions are used during the synthesis: the Ugi tetrazole four-component reaction (4CR) and the classical intramolecular Ugi 4CR. Tetrazole–diketopiperazines comprise analogs of and are bioisosteric to bioactive diketopiperazines. The scaffold is currently produced to fill the screening deck of the European Lead Factory.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201403401**



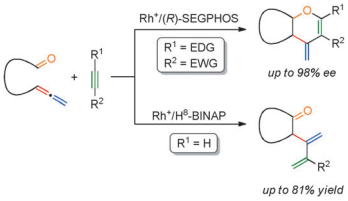
ChemistryOpen
DOI: **10.1002/open.201402022**

Molecular Sensors

M. Alfonso, A. Espinosa, A. Tárraga,* P. Molina*

Multifunctional Benzothiadiazole-Based Small Molecules Displaying Solvatochromism and Sensing Properties toward Nitroarenes, Anions, and Cations

Luminescent molecular chemosensors: Two novel imidazo[4,5-*e*]-2,1,3-benzothiadiazole derivatives were synthesized and their photophysical and binding properties were determined. The sensors displayed remarkable solvatofluorochromism and selectively sensed mercury(II) cations, acetate anions, and nitroaromatic derivatives, with discrimination between *p*-nitrophenol and picric acid.



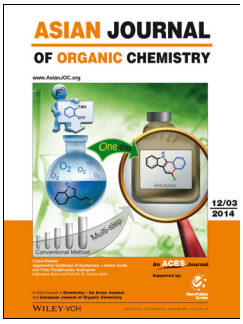
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201402239**

Cycloaddition

Y. Oonishi,* A. Saito, Y. Sato*

Rhodium(I)-Catalyzed Intermolecular [2+2+2] Cycloaddition of Allenyl Aldehydes with Alkynes and Related Cyclization

Ring-a-ring o' alkynes: Rhodium(I)-catalyzed cyclization of allenyl aldehydes with various alkynes was investigated. The cyclizations of internal alkynes that have both an electron-rich aromatic ring and an electron-withdrawing group at the terminus afforded [2+2+2] cycloaddition products while the reactions of terminal alkynes gave dienyl ketones instead of [2+2+2] cycloaddition products.



ChemViews magazine
DOI: **10.1002/chemv.201400103**

Career

A. Niedobitek

Career: As a Chemist in An Editorial Office

In an interview series, *ChemistryViews.org* gives readers a glimpse into the wide range of career paths in chemistry. This time, Dr. Richard Threlfall, Managing Editor of *Asian Journal of Chemistry*, talks about why he chose the editorial office over the lab and gives advice for aspiring editors