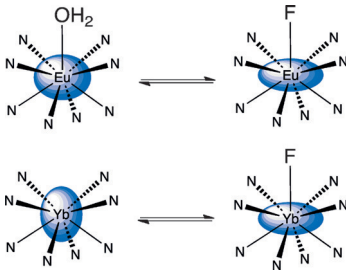
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Lanthanides

O. A. Blackburn, A. M. Kenwright, A. R. Jupp, J. M. Goicoechea, P. D. Beer, S. Faulkner*

Fluoride Binding and Crystal-Field Analysis of Lanthanide Complexes of Tetrapicolyl-Appended Cyclen

Magnetic anisotropy: This study shows the importance of the local crystal field in defining the behaviour of lanthanide complexes in solution. The observation that a well-defined N8 donor set can be used to change the sense of the magnetic anisotropy at a lanthanide centre has significant implications for control of spectroscopic properties in such systems (see scheme).



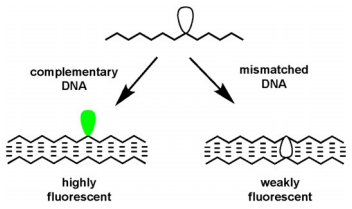
Chem. Eur. J.
DOI: **10.1002/chem.201601170**

DNA Targeting

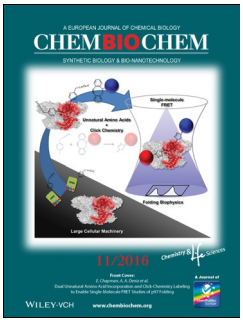
M. Kaura, P. J. Hrdlicka*

Efficient Discrimination of Single Nucleotide Polymorphisms (SNPs) Using Oligonucleotides Modified with C5-Pyrene-Functionalized DNA and Flanking Locked Nucleic Acid (LNA) Monomers

L.N.A. Confidential: Oligodeoxyribonucleotides modified with 5-[3-(1-pyrenecarboxamido)propynyl]-2′-deoxyuridine and proximal LNA monomers allow for more efficient fluorescent discrimination of SNPs than corresponding LNA-free probes.



Chem. Asian J.
DOI: **10.1002/asia.201600200**

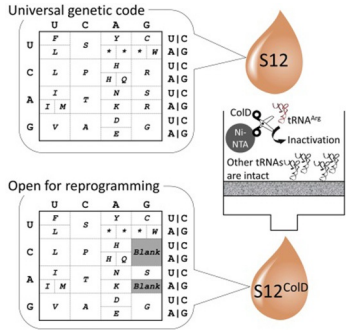


Protein Engineering

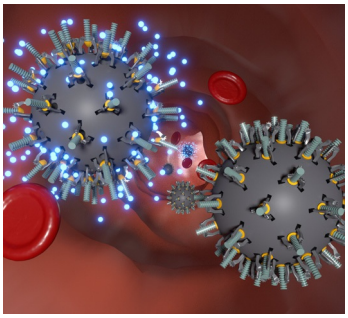
K. B. Lee, C. Y. Hou, C.-E. Kim, D.-M. Kim, H. Suga, T. J. Kang*

Genetic Code Expansion by Degeneracy Reprogramming of Arginyl Codons

tRNA^{Arg}-specific tRNase, colicin D, affects no other components of a cell-free protein synthesis system but leaves six blanks in the genetic code. These can be redirected for the incorporation of non-proteinogenic amino acids by genetic code reprogramming techniques.



ChemBioChem
DOI: **10.1002/cbic.201600111**



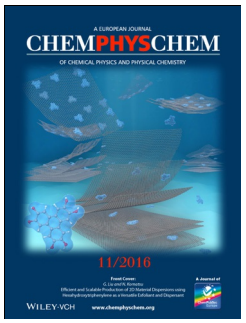
ChemPhysChem
DOI: **10.1002/cphc.201501167**

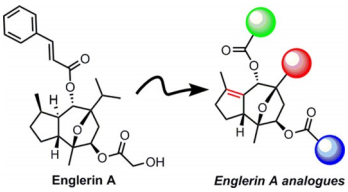
Nanodevices

B. Rühle, P. Saint-Cricq, J. I. Zink*

Externally Controlled Nanomachines on Mesoporous Silica Nanoparticles for Biomedical Applications

Taking control: The figure shows an artistic representation of nanomachines on mesoporous silica nanoparticles releasing cargo into the blood stream.





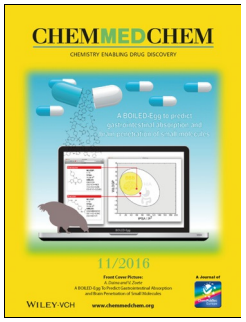
ChemMedChem
DOI: **10.1002/cmdc.201600040**

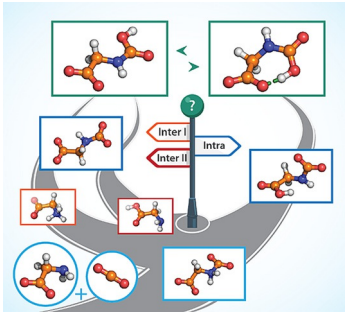
Anticancer Agents

L. López-Suárez, L. Riesgo, F. Bravo, T. T. Ransom, J. A. Beutler,* A. M. Echavarren*

Synthesis and Biological Evaluation of New (−)-Englerin Analogues

Kick cancer in the kidneys: Englerin A analogues with an unsaturation in the cyclopentyl ring (between C4 and C5) show significant biological activity against renal cancer cell lines. In addition, we have developed new routes to the preparation of novel analogues in which the original isopropyl group is substituted with cyclohexyl, phenyl, and cyclopropyl moieties.





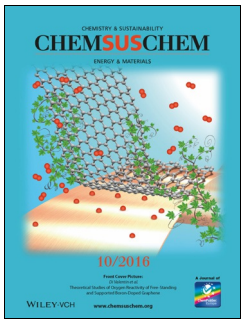
ChemSusChem
DOI: **10.1002/cssc.201600126**

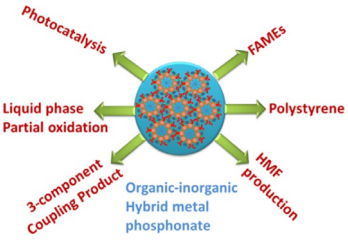
Carbon Dioxide Chemistry

D. S. Firaha, B. Kirchner*

Tuning the Carbon Dioxide Absorption in Amino Acid Ionic Liquids

On the right path: Theoretical methods make it possible to establish the most probable reaction pathways for CO_2 absorption in amino acid ionic liquids. This allows us to understand the specific CO_2 absorption capacities observed experimentally. The subsequent theoretical design of amino acid ionic liquids provides valuable insights for the tuning of the CO_2 absorption parameters.





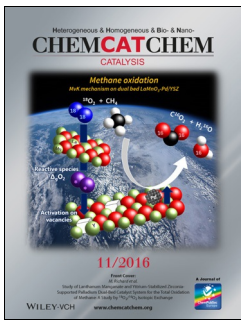
ChemCatChem
DOI: **10.1002/cctc.201501303**

Hybrid Materials

P. Bhanja, A. Bhaumik*

Organic–Inorganic Hybrid Metal Phosphonates as Recyclable Heterogeneous Catalysts

Hybrid metal phosphonates: A wide spectrum of organic–inorganic hybrid metal phosphonates has been reported in recent times and they show versatile applications in energy and environmental research, and particularly in catalysis. All the recent developments in designing these metal phosphates are summarized here with a special emphasis on their catalytic potential in liquid-phase organic transformations.

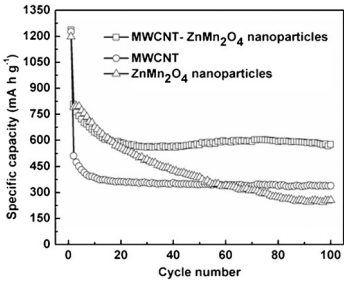


Batteries

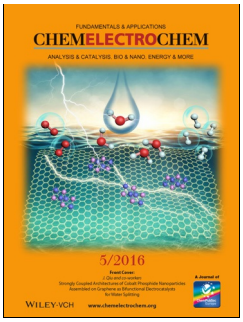
A. K. Mondal,* H. Liu, X. Xie, K. Kretschmer, G. Wang*

Hydrothermal Synthesis of Multiwalled Carbon Nanotube–Zinc Manganate Nanoparticles as Anode Materials for Lithium Ion Batteries

Working better together: Multiwalled carbon nanotube (MWCNT)–$ZnMn_2O_4$ nanoparticles were fabricated by a hydrothermal method without further thermal treatment. Owing to the synergistic effect and strong interactions between the MWCNTs and $ZnMn_2O_4$ nanoparticles, the MWCNT–$ZnMn_2O_4$ composite exhibited a higher specific capacity (809 $mA\,h\,g^{-1}$; see figure), good rate capability and stable cycling performance compared to pristine $ZnMn_2O_4$ nanoparticles and MWCNTs.



ChemPlusChem
DOI: **10.1002/cplu.201500528**

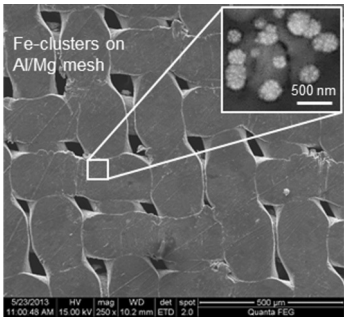


Nanoparticles

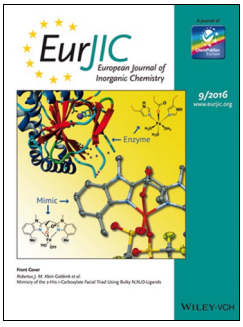
M. Baloch, C. M. López*

Effect of Additives on the Pulsed-Galvanostatic Electrodeposition of Iron Nanoparticles from Formamide Media

Getting in shape: Iron-based nanoparticles are deposited onto Al/Mg grids by using pulsed-galvanostatic electrodeposition from formamide media with and without additives. The morphology of the particles, the electrochemical properties of the solutions, and changes in the electronic environment of the active iron cations are studied as a function of the type of additive used.



ChemElectroChem
DOI: **10.1002/celc.201600039**

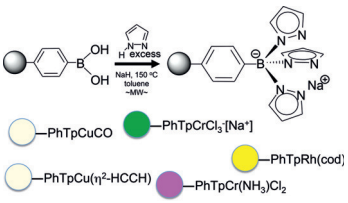


Supported Scorpionate Complexes

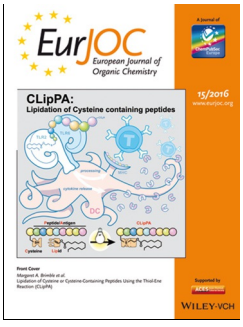
P. J. Desrochers,* A. J. Pearce, T. R. Rogers, J. S. Rodman

Rapid Synthesis of a Functional Resin-Supported Scorpionate and Its Copper(I, II), Rhodium(I), and Chromium(III) Complexes

A microwave-assisted method is described for the rapid preparation of a heterogeneous resin-supported scorpionate as its sodium salt. Formation of functional heterogeneous metal scorpionates was confirmed from subsequent reactions of its varied metal (Cr, Cu, Rh) complexes.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201501254**

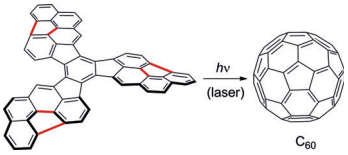


Fullerenes

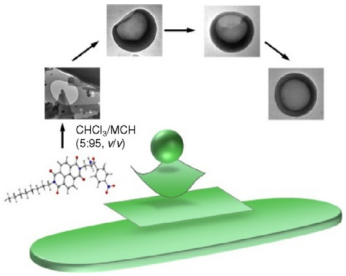
R. Dorel, P. de Mendoza, P. Calleja, S. Pascual,
E. González-Cantalapiedra, N. Cabello, A. M. Echavarren*

Synthesis of a Crushed Fullerene $C_{60}H_{24}$ through Sixfold Palladium-Catalyzed Arylation

Advanced crushed fullerene $C_{60}H_{24}$, synthesized by a sixfold palladium-catalyzed intramolecular arylation, forms C_{60} fullerene by high-power laser irradiation in LDI-MS



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201600311**



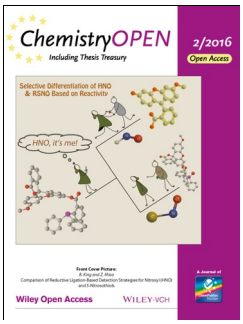
Aggregation-Induced Emission

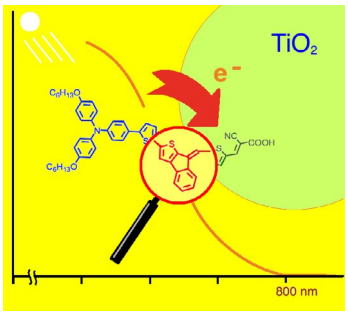
N. V. Ghule, D. D. La, R. S. Bhosale, M. Al Kobaisi, A. M. Raynor, S. V. Bhosale,* S. V. Bhosale*

Effect of Amide Hydrogen Bonding Interaction on Supramolecular Self-Assembly of Naphthalene Diimide Amphiphiles with Aggregation Induced Emission

Delightful diimides! The mechanism of self-assembly of a new naphthalene diimide (NDI) amphiphile in a mixture of chloroform/methylcyclohexane relies on solvophobic interactions, that result in the formation of microcups and nanobelts through π–π stacking of the core along with the hydrophobic chain packing and H-bonding. The closure of microcups leads to the formation of vesicles and microcapsules, as confirmed by infrared spectroscopy, X-ray diffraction, and scanning and transmission electron microscopy.

ChemistryOpen
DOI: **10.1002/open.201500201**





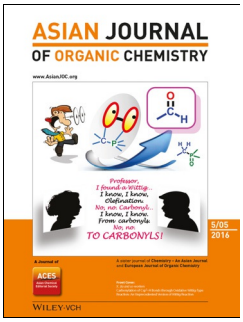
Solar Cell Sensitizers

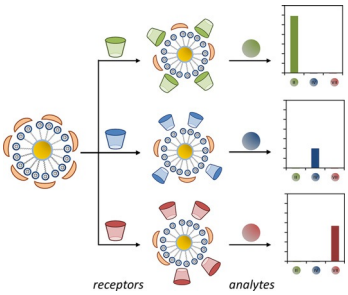
C.-J. Liang, Y.-J. Lin, Y.-S. Yen, J. T. Lin,* M.-C. P. Yeh*

Metal-Free Indeno[2,1-*b*]thiophene-Based Sensitizers for Dye-Sensitized Solar Cells

Anchoring thiophenes: A series of indeno[2,1-*b*]thiophene-containing organic dyes (**IDT1**–**IDT5**) has been employed as sensitizers for dye-sensitized solar cells, and the UV/Vis spectra are measured beyond 700 nm. Among them, dyes **IDT3**–**IDT5** with the thiophene unit conjugated with an anchor have better light harvesting and higher J_{SC} values. Furthermore, **IDT5** with chenodeoxycholic acid (CDCA) as the co-adsorbent has the highest power conversion efficiency (5.06%), which is 68% of the standard device based on N719 dye.

Asian J. Org. Chem.
DOI: **10.1002/ajoc.201600100**





Chemosensing

S. Neri, R. Pinalli, E. Dalcanale, L. J. Prins*

Orthogonal Sensing of Small Molecules Using a Modular Nanoparticle-Based Assay

Feel free to choose: A modular sensing assay is described that is able to detect small molecules under competitive conditions. The selectivity of the assay can be simply tuned by changing the macrocyclic receptors bound to the surface of a monolayer-protected gold nanoparticle.

ChemNanoMat
DOI: **10.1002/cnma.201600075**

Nicotine

Nicotine–Chemistry of Smoking

Why do we smoke nicotine and do not inject it or take it in pill form? *ChemViews Magazine* gives a graphical overview of nicotine uptake from different sources and explains how e-cigarettes work.

ChemViews magazine
DOI: **10.1002/chemv.201600037**