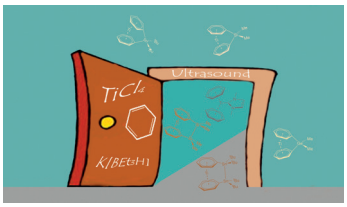
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.


## *Titanium Complexes*

H. Braunschweig,* C. Brückner, M. A. Celik, K. Dück, F. Hupp, T. Kramer, J. Krebs, I. Krummenacher

*Ansa*-Bridged Bis(benzene) Titanium Complexes

**Bridge over bis(benzene) Ti**: A route to unprecedented *ansa*-bridged bis(benzene) titanium complexes has been developed through dilithiation of a bis(arene) precursor and subsequent salt metathesis with Group 14 element halides (see figure). Furthermore, the linear complex bis(benzene) titanium was found to react with the N-heterocyclic carbene 1,3-dimethylimidazole-2-ylidene (IMe) to give the bent sandwich complex $[Ti(\eta^6\text{-}C_6H_6)_2(IMe)]$.



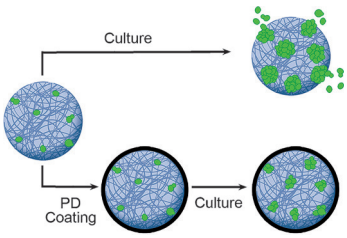

*Chem. Eur. J.*
DOI: **10.1002/chem.201500737**


## *Encapsulation*

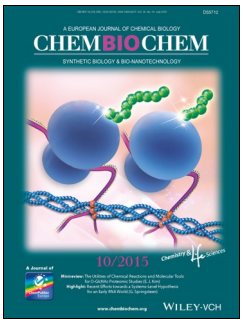
B. J. Kim, T. Park, S.-Y. Park, S. W. Han, H.-S. Lee, Y.-G. Kim,* I. S. Choi*

Control of Microbial Growth in Alginate/Polydopamine Core/Shell Microbeads

**Trapped alive**: The growth of *Saccharomyces cerevisiae* yeast cells was tightly controlled by forming the polydopamine (PD) shell onto the alginate microbeads that encapsulated the yeast cells, and this controlled growth of microbes prevented unwanted cell release from the microbeads while maintaining cell viability.




*Chem. Asian J.*
DOI: **10.1002/asia.201500360**

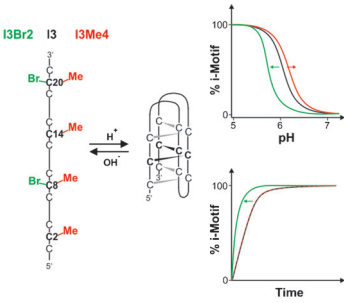



## *DNA Nanotechnology*

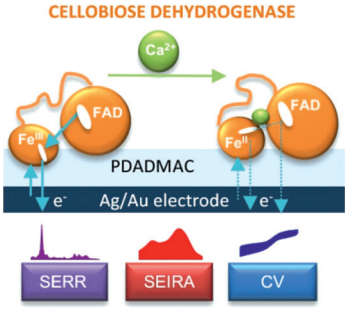
L. Lannes, S. Halder, Y. Krishnan, H. Schwalbe*

Tuning the pH Response of i-Motif DNA Oligonucleotides

**pH response shifting**: The human telomeric DNA molecule I3 is able to adopt an i-motif conformation in response to pH change. Herein, we show that the pH response range of I3 can be shifted towards more basic pH values by introducing 5-methylcytidines and towards more acidic pH values by introducing 5-bromocytidines, which accelerated folding of the i-motif.




*ChemBioChem*
DOI: **10.1002/cbic.201500182**



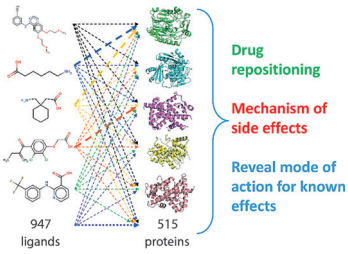

## Bioelectrochemistry

P. Kielb, M. Sezer, S. Katz, F. Lopez, C. Schulz, L. Gorton, R. Ludwig, U. Wollenberger, I. Zebger, I. M. Weidinger*

Spectroscopic Observation of Calcium-Induced Reorientation of Cellobiose Dehydrogenase Immobilized on Electrodes and its Effect on Electrocatalytic Activity

**A new road**: Electrochemistry combined with surface enhanced vibrational (SERR and SEIRA) spectroscopy are employed to obtain mechanistic insight into the catalytic performance of cellobiose dehydrodegane (*Mt*CDH) immobilized on noble metal electrodes in the presence of $Ca^{2+}$ ions. The results show induced reorientation of the enzyme on the electrode, which leads to a new electron transfer pathway between the protein and the electrode.

*ChemPhysChem*
DOI: **10.1002/cphc.201500112**

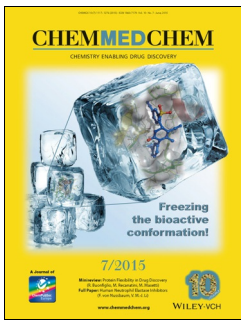

## Computational Medicinal Chemistry

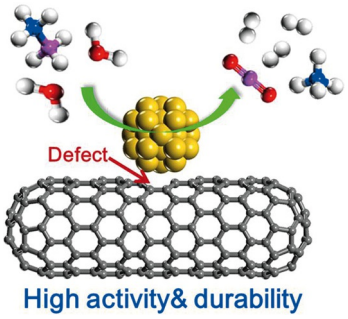
H. Patel, X. Lucas, I. Bendik, S. Günther,* I. Merfort*

Target Fishing by Cross-Docking to Explain Polypharmacological Effects

**Taking the bait**: Target fishing was performed by high-throughput cross-docking of 947 well-known drugs with 515 proteins to find new target interactions. The cross-docking approach suggests drug repositioning opportunities, molecular mechanisms of side effects, and undiscovered modes of action.

*ChemMedChem*
DOI: **10.1002/cmdc.201500123**



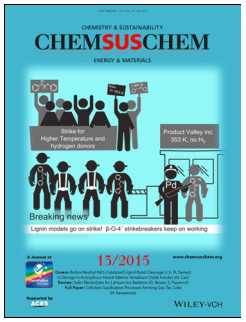

## Hydrogen Storage

W. Chen, X. Duan,* G. Qian, D. Chen,* X. Zhou

Carbon Nanotubes as Support in the Platinum-Catalyzed Hydrolytic Dehydrogenation of Ammonia Borane

**Just gimme defects please**: The hydrolytic dehydrogenation of ammonia borane by platinum nanoparticles (NPs) is used to investigate the chemistry of carbon nanotube (CNT) supports. The use of defect-rich CNTs, as compared to pristine CNTs and CNTs rich in oxygen groups, not only enhances the binding energy of platinum, leading to the highest hydrogen generation rate, but also inhibits the adsorption of boron-containing species and stabilizes the platinum NPs to resist the agglomeration, leading to the highest durability.

*ChemSusChem*
DOI: **10.1002/cssc.201500228**



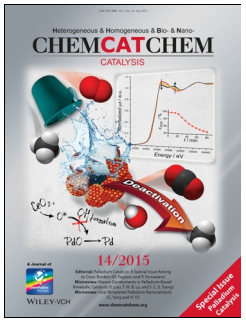

## Happy Birthday

F. J. Lahoz,* J. J. Pérez-Torrente*

In Honour of the 70th Birthday of Professor Luis A. Oro

**The bold and the beautiful**: Prof. Luis Oro has a long career performed with tons of enthusiasm, excellent companions and plenty of generosity. It is our pleasure and privilege to walk around the main steps of Professor Oro's life; a life dedicated to investigation and to situating chemical research, and science in general, in the proper place in our modern society.

*ChemCatChem*
DOI: **10.1002/cctc.201505050**

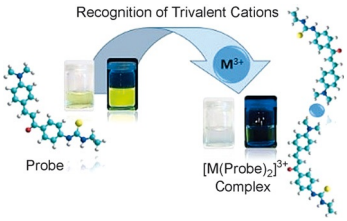



## Sensors

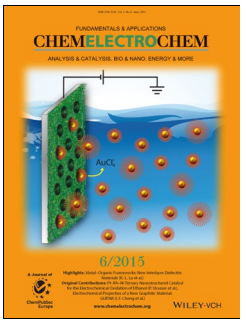
L. E. Santos-Figueroa, A. Llopis-Lorente, S. Royo, F. Sancenón, R. Martínez-Máñez,* A. M. Costero,* S. Gil, M. Parra

A Chalcone-Based Highly Selective and Sensitive Chromofluorogenic Probe for Trivalent Metal Cations

**Recognizing trivalent cations**: A new chalcone-containing probe has been devised for the chromo-fluorogenic sensing of $Al^{3+}$, $Fe^{3+}$, $Cr^{3+}$, $Ga^{3+}$, $In^{3+}$, and $As^{3+}$ cations over mono- and divalent cations and several anions (see figure). The limit of detection of this probe is in the nM range.




*ChemPlusChem*
DOI: **10.1002/cplu.201500042**

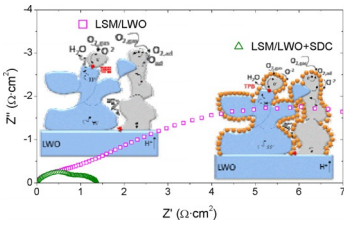



## Fuel Cells

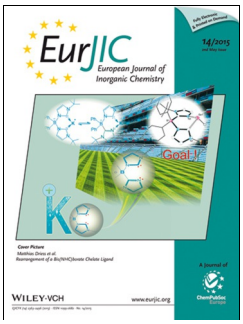
C. Solís, L. Navarrete, F. Bozza, N. Bonanos, J. M. Serra*

Catalytic Surface Promotion of Composite Cathodes in Protonic Ceramic Fuel Cells

**Through the net**: The incorporation of ceria-based catalytic nanoparticles in proton-conducting solid oxide fuel cell (SOFC) cathodes allows a substantial increase in the electrochemical activity related to oxygen reduction reactions, appearing exclusively at low frequencies in the impedance spectrum. These surface-related processes are further promoted by imposing a net current through the infiltrated electrode.




*ChemElectroChem*
DOI: **10.1002/celc.201500068**

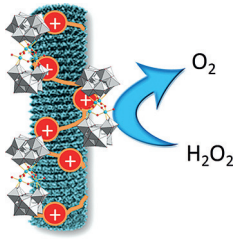



## Polyoxometalate Catalysts

D. Vilona, A. Sorarù, C. Maccato, R. Bortolaso, L. Trainotti, F. Valentini, A. Boaretto, C. Cepek, M. Bonchio,* M. Carraro*

Viral Nanotemplates Armed with Oxygenic Polyoxometalates for Hydrogen Peroxide Detoxification

A polyoxometalate with oxygenic activity was anchored on the TMV (tobacco mosaic virus). The rod-like biogenic template enables the formation of catalytic nanoarrays for $H_2O_2$ dismutation.



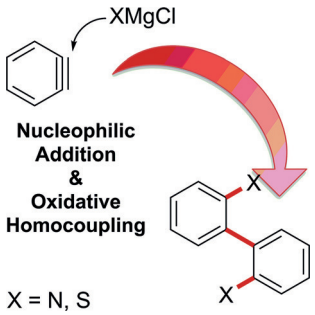

*Eur. J. Inorg. Chem.*
DOI: **10.1002/ejic.201500155**


## Synthetic Methods

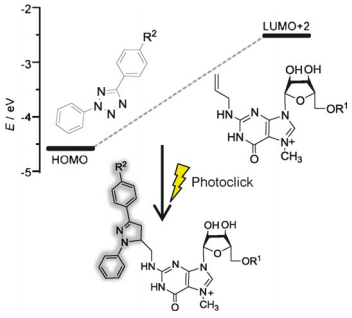
F. Sibbel, C. G. Daniliuc, A. Studer*

2,2′-Bis-substituted Biphenyls by the Addition of Nucleophiles to Benzyne Followed by In Situ Oxidative Homocoupling

Three σ-bonds in one pot! Mg-anilides and -thiolates readily add to the reactive triple bond of benzyne to form an aryl-Grignard intermediate. In situ oxidative homocoupling of this species using $Cu^{II}$ and dioxygen leads to 2,2′-bis-substituted biphenyls with interesting crystal structures




*Eur. J. Org. Chem.*
DOI: **10.1002/ejoc.201500456**



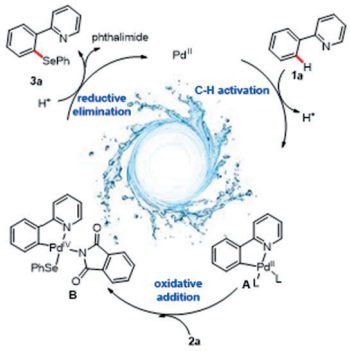

*ChemistryOpen*
DOI: **10.1002/open.201402104**

### *RNA Labeling*

D. Stummer, C. Herrmann,* A. Rentmeister*

Quantum Chemical Calculations and Experimental Validation of the Photoclick Reaction for Fluorescent Labeling of the 5' cap of Eukaryotic mRNAs

**Clicking with mRNA!** Bioorthogonal click reactions are powerful tools to specifically label biomolecules in living cells. This joint theoretical and experimental study shows that an *N*-allyl-modified 5' cap found in mRNA can be reacted with tetrazoles in a photoclick reaction. The combination of enzymatic allylation and photoclick chemistry generates a turn-on fluorophore specifically at the 5' cap found in eukaryotic mRNAs.

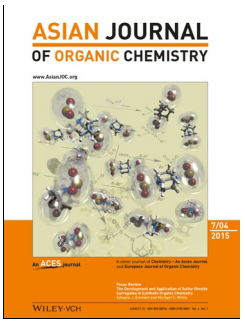

*Asian J. Org. Chem.*
DOI: **10.1002/ajoc.201500192**

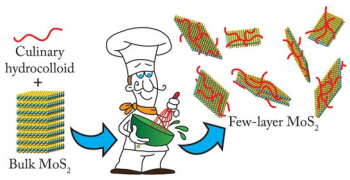
### *C–H activation*

W. Jin, P. Zheng, W.-T. Wong,* G.-L. Law*

Efficient Palladium-Catalyzed Direct C–H Phenylselenylation of (Hetero)Arenes in Water

**Soft sel**: An efficient palladium-catalyzed direct phenylselenation of (hetero)arenes in water has been realized. This method affords a more direct route for synthesizing organic selenides. The present catalytic system is quite simple without any need for an external oxidant, surfactant, or other additive. A variety of diaryl selenides with high functional group tolerance have been obtained in good to excellent yields and regioselectivity.




*ChemNanoMat*
DOI: **10.1002/cnma.201500022**

### *2D Materials*

S. Ravula, J. B. Essner, G. A. Baker*

Kitchen-Inspired Nanochemistry: Dispersion, Exfoliation, and Hybridization of Functional $MoS_2$ Nanosheets Using Culinary Hydrocolloids

**Green a-peel**: Edible culinary hydrocolloids proved to be highly effective agents for exfoliating from bulk, crystalline material few-layered $MoS_2$ nanosheets, which served as scaffolds for in situ gold nanoparticle generation, creating hybrid nanocatalysts.


*ChemViews magazine*
DOI: **10.1002/chemv.201500036**

### *Light*

V. Köster

Snapshot of Light as Both a Particle and Wave

It is well known that light can behave as a particle and as a wave, but it took until 2015 to capture this dual behavior of light in an image that simultaneously shows quantization and interference. Fabrizio Carbone, École polytechnique fédérale de Lausanne (EPFL), Switzerland, talked to Vera Köster about the research behind the picture.