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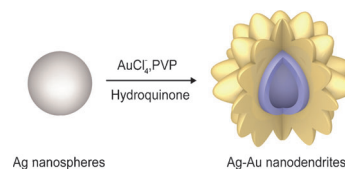


Nanomaterials

A. G. M. da Silva, M. L. de Souza, T. S. Rodrigues, R. S. Alves, M. L. A. Temperini, P. H. C. Camargo*

Rapid Synthesis of Hollow Ag–Au Nanodendrites in 15 Seconds by Combining Galvanic Replacement and Precursor Reduction Reactions

Spiky and hollow: By using Ag nanospheres as seeds, hollow Ag–Au nanodendrites can be prepared in 15 s by a combination of galvanic replacement reaction between Ag and AuCl_4^- (aq), and AuCl_4^- (aq) reduction using hydroquinone in the presence of polyvinylpyrrolidone (PVP) in water. Owing to their sharp tips, the Ag–Au nanodendrites were effective substrates for surface-enhanced Raman scattering (SERS) detection of 4-mercaptopyridine and rhodamine 6G.



Chem. Eur. J.
DOI: [10.1002/chem.201404739](https://doi.org/10.1002/chem.201404739)

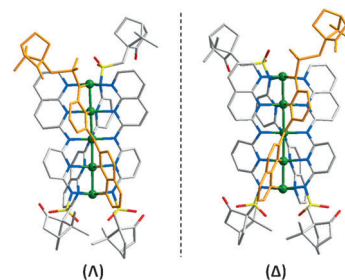


Helical Structures

C.-H. Yu, M.-S. Kuo, C.-Y. Chuang, G.-H. Lee, S.-A. Hua, B.-Y. Jin, S.-M. Peng*

Chirality Control of Quadruple Helices of Metal Strings by Peripheral Chiral Ligands

Let's twist again! Chirality control of helices with the Δ or Λ form is interesting in various fields such as extended metal atom chains (EMACs), in which ligands helically wrap the metal backbones. We report two EMACs (see picture) whose chiralities are controlled by chiral ligands with camphorsulfonyl groups.



Chem. Asian J.
DOI: [10.1002/asia.201402823](https://doi.org/10.1002/asia.201402823)

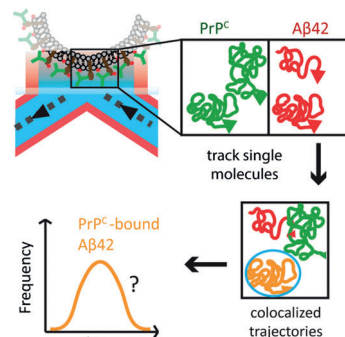


Amyloid Peptides

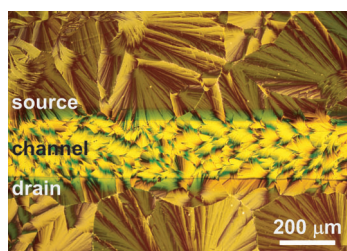
K. A. Ganzinger, P. Narayan, S. S. Qamar, L. Weimann, R. T. Ranasinghe, A. Aguzzi, C. M. Dobson, J. McColl,* P. St. George-Hyslop,* D. Klenerman*

Single-Molecule Imaging Reveals that Small Amyloid- β_{1-42} Oligomers Interact with the Cellular Prion Protein (PrP^C)

Small oligomers bind PrP^C : TIRF microscopy and a single-particle tracking approach have determined that amyloid- β peptide oligomers ($\text{oA}\beta$) interact with the cellular prion protein (PrP^C) on live neuronal cells. Having dissected this interaction at the single-molecule level, we estimate that predominantly small $\text{oA}\beta_{42}$ species (dimers and trimers) bind to PrP^C .



ChemBioChem
DOI: [10.1002/cbic.201402377](https://doi.org/10.1002/cbic.201402377)



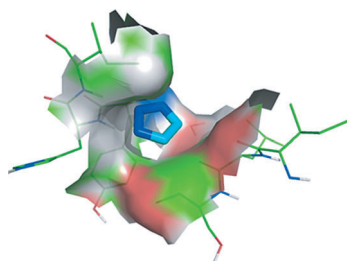
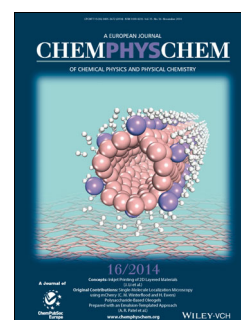
ChemPhysChem
DOI: 10.1002/cphc.201402360

Organic Semiconductors

C.-H. Kim,* H. Hlaing, M. M. Payne, K. G. Yager, Y. Bonnassieux, G. Horowitz, J. E. Anthony, I. Kymissis*

Strongly Correlated Alignment of Fluorinated 5,11-Bis(triethylgermylethynyl)anthradithiophene Crystallites in Solution-Processed Field-Effect Transistors

Crystalline organic semiconductor film: A functionalized acene derivative diF-TEG-ADT has an exceptional ability to form highly aligned crystalline domains. Grazing-incidence wide-angle X-ray scattering measurements define the crystal structure of the molecular films that constitute a hole-transporting field-effect transistor channel.



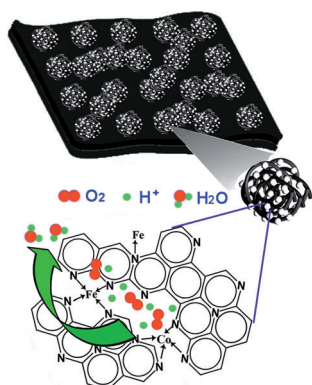
ChemMedChem
DOI: 10.1002/cmdc.201402233

Identifying Pharmacophores

A. Massarotti,* S. Aprile,* V. Mercalli, E. Del Grosso, G. Grosa, G. Sorba, G. C. Tron

Are 1,4- and 1,5-Disubstituted 1,2,3-Triazoles Good Pharmacophoric Groups?

The time is ripe to demonstrate the real ability of 1,2,3-triazoles to play a pivotal role in drug–receptor interactions. We analyzed the X-ray crystal structures of 1,2,3-triazole-containing protein complexes to understand their pharmacophoric role. Furthermore, the metabolic stability, the ability to inhibit cytochromes, and the aqueous solubility contribution of the 1,2,3-triazole nucleus were analyzed.



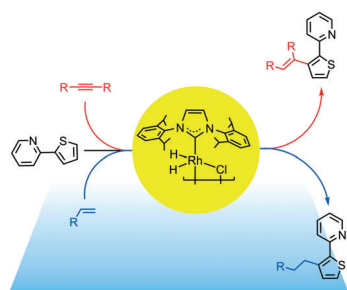
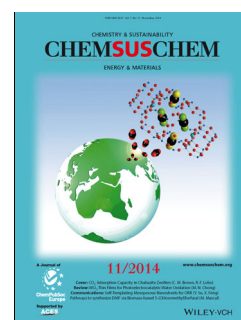
ChemSusChem
DOI: 10.1002/cssc.201402680

Electrochemistry

S. Li, D. Wu, H. Liang, J. Wang, X. Zhuang, Y. Mai, Y. Su,* X. Feng*

Metal–Nitrogen Doping of Mesoporous Carbon/Graphene Nanosheets by Self-Templating for Oxygen Reduction Electrocatalysts

Double doping strategy: Highly efficient electrocatalysts for the oxygen reduction reaction (ORR) are prepared by a self-templating strategy. The strategy yields carbon/graphene nanosheets that are doped by both transition metals and nitrogen, having a unique two-dimensional morphology and tunable meso-scale porosity. The as-prepared iron–cobalt catalysts exhibit excellent electrocatalytic activity towards the ORR and are stable in both alkaline and acidic media.



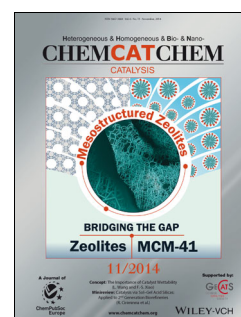
ChemCatChem
DOI: 10.1002/cctc.201402507

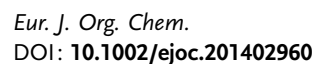
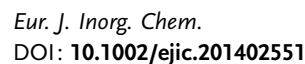
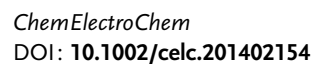
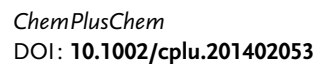
Carbenes

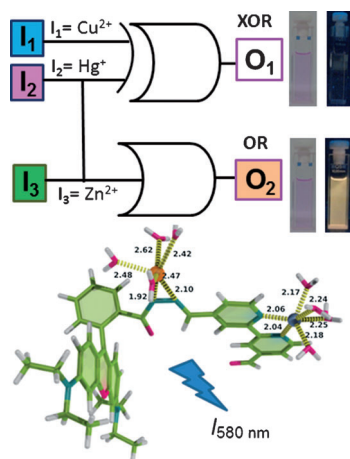
L. Rubio-Pérez, M. Iglesias,* R. Castarlenas, V. Polo, J. J. Pérez-Torrente, L. A. Oro*

Selective C–H Bond Functionalization of 2-(2-Thienyl)pyridine by a Rhodium N-Heterocyclic Carbene Catalyst

For your C–H bond only: $[\text{Rh}(\mu\text{-Cl})(\text{H})_2(\text{IPr})_2]$ (IPr = 1,3-bis-(2,6-diisopropylphenyl)imidazol-2-ylidene) catalyzes the selective functionalization of 2-(2-thienyl)pyridine efficiently with a range of alkenes and internal alkynes. A catalytic cycle is proposed on the basis of the identification of key reaction intermediates and the study of their reactivity by NMR spectroscopy.







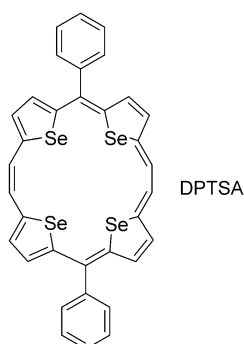
ChemistryOpen
DOI: 10.1002/open.201402020

Molecular Sensors

C. Núñez,* S. M. Santos, E. Oliveira, H. M. Santos, J. L. Capelo, C. Lodeiro*

Rhodamine-Appended Bipyridine: XOR and OR Logic Operations Integrated in an Example of Controlled Metal Migration

Logic operations, metal migration: The spectral response associated with the unusual metal migration of various metal ions from the chelating rhodamine terminal in the open-ring form of the remote bipyridyl terminal in compound **1** leads to a combination of optical responses that could be correlated for demonstrating some simple logic operations.



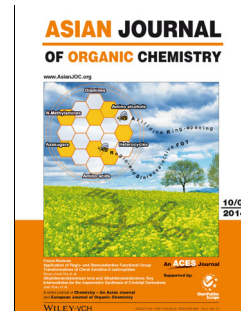
Asian J. Org. Chem.
DOI: 10.1002/ajoc.201402157

Organic Electronics

H. Liu, Y. Qin, W. Xu,* D. Zhu*

Synthesis, Characterization, and Electron-Transport Properties of a π -Conjugated Heteromacrocyclic: A Selenium-Bridged Neutral Annulene

Sel-ling your soul: The synthesis and characterization of a π -conjugated, macrocyclic, selenium-bridged molecule, 5,16-diphenyltetraselenolo[22]annulene[2,1,2,1] (DPTSA), is reported. DPTSA was shown to have high aromaticity by ¹H NMR and UV/vis absorption spectra. Its electrochemical properties and electron-transport properties were studied. Thin-film organic field-effect transistors of DPTSA display *p*-type semiconducting behavior.



ChemViews magazine
DOI: 10.1002/chemv.201400062

Food

Espresso Crema

What is the crema of an espresso composed of? How should it look in a well-made coffee and how does it affect the taste? Find out in this month's Clever Picture in *ChemViews Magazine*.

