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Suresh K. Bhargava, Anthony F. Hill and Nedaossadat Mirzadeh

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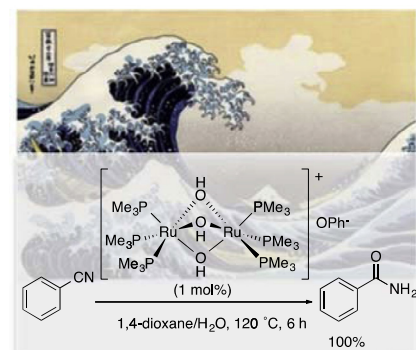
Preface – Bennett Special Issue

Sayori Kiyota, Takako Kobori, Hirofumi Soeta, You-ichi Ichikawa, Nobuyuki Komine, Sanshiro Komiya and Masafumi Hirano

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Synthesis of and catalytic nitrile hydration by a cationic tris(μ -hydroxo)diruthenium(II) complex having PMe_3 ligands

Treatment of $[\text{Ru}(\eta^4\text{-1,5-COD})(\eta^6\text{-1,3,5-COT})]$ (**1**)/ PMe_3 with phenyl vinyl ether in the presence of water gives a tris(μ -hydroxo)diruthenium(II) complex $[(\text{Me}_3\text{P})_3\text{Ru}(\mu\text{-OH})_3\text{Ru}(\text{PMe}_3)_3]^+[\text{OPh}]^-\cdot\text{HOPh}$ (**3**·HOPh) with evolution of ethylene. The molecular structure of **3**·HOPh is unequivocally determined by X-ray analysis. Complex **3** acts as a catalyst for nitrile hydration. The hydration of benzonitrile was achieved by **3** (1.0 mol%) in 1,4-dioxane at 120 °C for 6 h to give benzamide quantitatively.

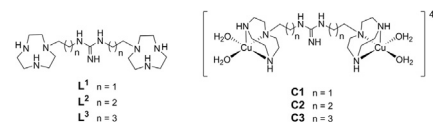


Linda Tjioe, Tanmaya Joshi, Bim Graham and Leone Spiccia

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Synthesis and phosphate ester cleavage properties of copper(II) complexes of guanidinium-bridged bis(1,4,7-triazacyclononane) ligands

The binuclear copper(II) complexes of three novel *bis*(1,4,7-triazacyclononane) ligands, featuring a bridging guanidinium group between two macrocyclic units, greatly accelerate the cleavage of phosphodiester commonly used in studies of synthetic phosphatase mimics.

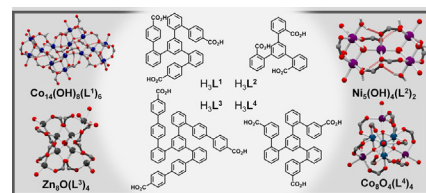


Stephen P. Argent, Irina Tarassova, Alex Greenaway, Harriot Nowell, Sarah A. Barnett, Mark R. Warren, Chiu C. Tang, Christopher G. Morris, William Lewis, Neil R. Champness, Martin Schröder and Alexander J. Blake

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Assembly of high nuclearity clusters from a family of tripodal tris-carboxylate ligands

A family of four tris-carboxylic acid ligands H_3L^{1-4} have been synthesised and reacted with first row transition metal cations to give nine complexes which have been structurally characterised by X-ray crystallography. The ligands share a common design motif having three arms connected to a benzene core via three *ortho*-disubstituted phenyl linkers and show a propensity to form high nuclearity complexes.

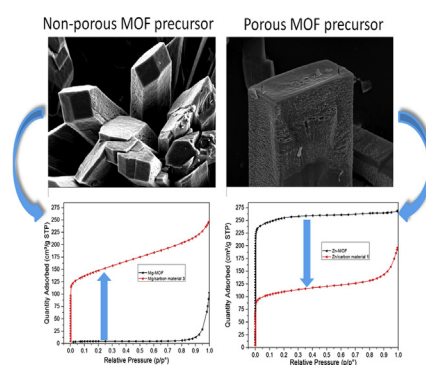


Yingdian He, Jin Shang, Qinghu Zhao, Qinfen Gu, Ke Xie, Gang Li, Ranjeet Singh, Penny Xiao and Paul A. Webley

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A comparative study on conversion of porous and non-porous metal-organic frameworks (MOFs) into carbon-based composites for carbon dioxide capture

We report four novel carbon-based materials, converted from a non-porous Mg-MOF and a porous Zn-MOF for carbon dioxide capture. This comparative study highlights the relationship of the porosity generation via carbonization and the thermal/crystallographic stability.

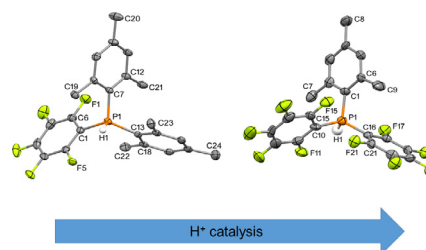


Arup Sinha, Amit K. Jaiswal and Rowan D. Young

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Sterically congested phosphonium borate acids as effective Brønsted acid catalysts

Phosphonium botate acids were synthesized via heterolytic dihydrogen cleavage in the presence of triisopropylsilylium and characterized by spectroscopic and crystallographic methods. Brønsted acid catalysis using these prepared compounds proved to be efficient for a number of challenging reactions owing to the restrained nucleophilicity of the sterically hindered conjugate bases.

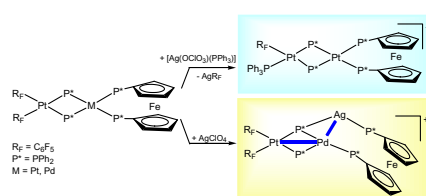


Daniela Giardina-Papa, Irene Ara, Susana Ibáñez, Piero Mastrolilli, Vito Gallo and Juan Forníés

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Synthesis and reactivity of phosphanido bridged 1,1'-bis(diphenylphosphino)ferrocene complexes $[(R_F)_2Pt(\mu-PPh_2)_2M(dppf)]$ [$M = Pt, Pd$]

The behaviour of $[Ag(OCIO_3)(PPh_3)]$ or $Ag(ClO_4)$ towards $[(C_6F_5)_2Pt(\mu-Ph_2)_2M(1,1'-bis(diphenylphosphino)ferrocene)]$ is strongly dependent on M . Ag^+ can act as: (a) C_6F_5 scavenger ($M = Pt$) or: (b) an electrophile which produces insertion of Ag^+ into the $Pd-P$ bond and forms a tetranuclear derivative with $Pd-Ag$ and $Pd-Pt$ bonds ($M = Pd$).



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