

Dalton Transactions

An international journal of inorganic chemistry incorporating Acta Chemica Scandinavica
rsc.li/dalton

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 1477-9226 CODEN DTARAF 53(47) 18793–19008 (2024)

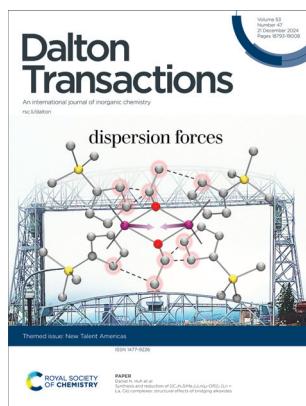


Cover

See Michael I. Webb *et al.*, pp. 18845–18855.

Image reproduced by permission of Michael I. Webb from *Dalton Trans.*, 2024, **53**, 18845.

Acknowledgement: Generated with Google Gemini



Inside cover

See Daniel N. Huh *et al.*, pp. 18856–18864.

Image reproduced by permission of Daniel N. Huh from *Dalton Trans.*, 2024, **53**, 18856.

EDITORIAL

18802

New talent: Americas 2024

Tim Storr, Ellen Matson and Illich Ibarra



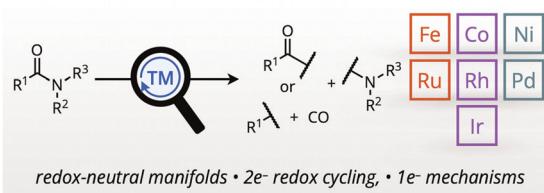
PERSPECTIVES

18803

Mechanistic insights on C(acyl)-N functionalisation mediated by late transition metals

Vivek G. Pillai, Kaycie R. Malyk and C. Rose Kennedy*

Mechanisms of C(acyl)-N Functionalisation



EES Batteries

Exceptional research on
batteries and energy storage

Part of the EES family

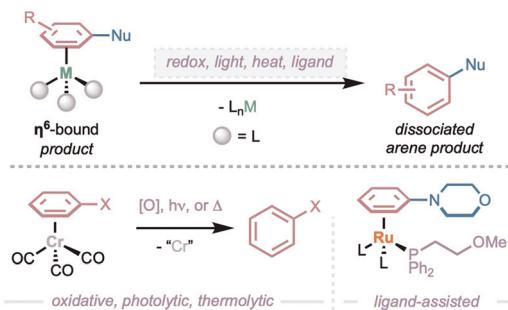
Join
in | Publish with us
rsc.li/EESBatteries

PERSPECTIVES

18819

Strategies for arene dissociation from transition metal η^6 -arene complexes

Brett Akana-Schneider, Yahui Guo, Bryan Parnitzke and Joseph Derosa*

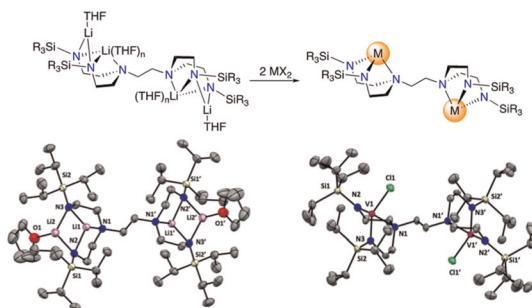


COMMUNICATIONS

18828

A twist on a classic scaffold: rational design of a new bimetallic platform

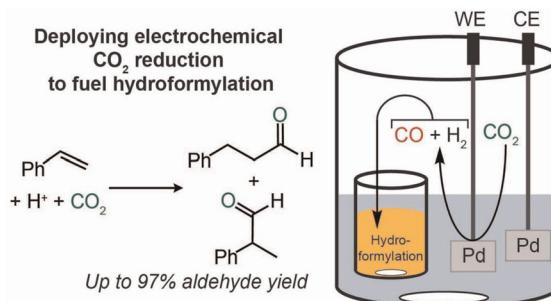
Sultana P. Rumi, Lev N. Zakharov and Addison N. Desnoyer*



18834

Integrated electrochemical CO₂ reduction and hydroformylation

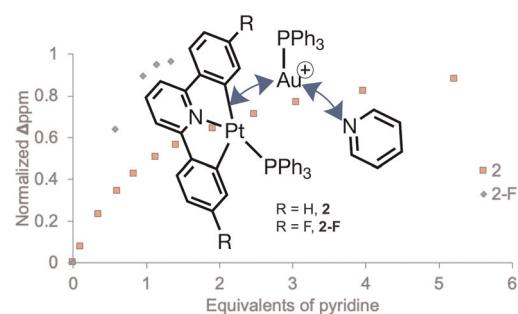
Brandon J. Jolly, Michael J. Pung and Chong Liu*



18839

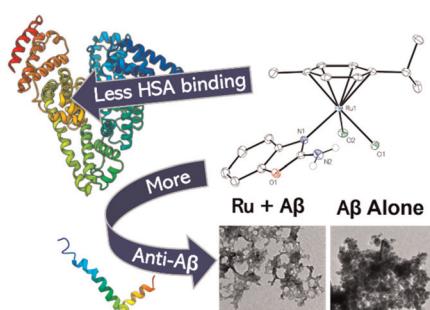
Stability of metal–metal interactions in transmetallation intermediates based on electronics of bridging arene ligands determined through pyridine titrations

Rana Marghalani and Eric S. Cueny*



PAPERS

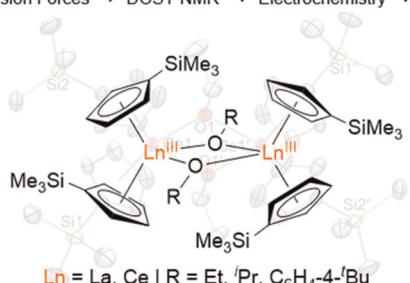
18845

**Ru(II)-arene azole complexes as anti-amyloid- β agents**

Ryan M. Hacker, Daniela M. Grimard, Katie A. Morgan, Eaman Saleh, Morgan M. Wrublik, Cade J. Meiss, Caitlyn C. Kant, Marjorie A. Jones, William W. Brennessel and Michael I. Webb*

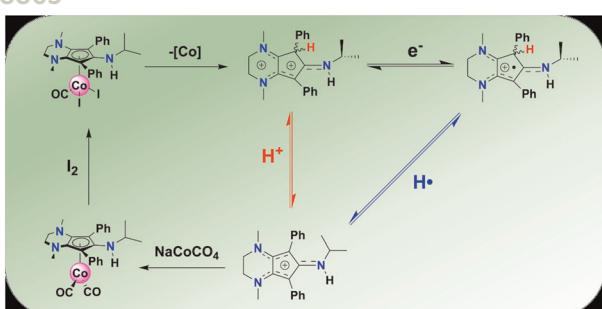
18856

✓ Dispersion Forces ✓ DOSY NMR ✓ Electrochemistry ✓ La^{II} EPR

**Synthesis and reduction of $[(\text{C}_5\text{H}_4\text{SiMe}_3)_2\text{Ln}(\mu\text{-OR})]_2$ ($\text{Ln} = \text{La, Ce}$) complexes: structural effects of bridging alkoxides**

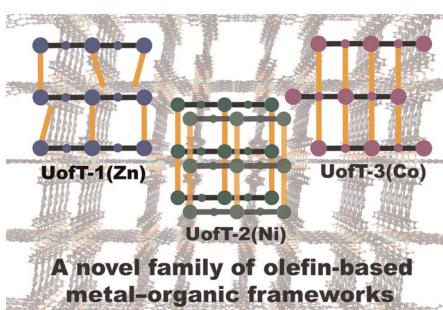
Adrian N. Brown, Jack N. Kelleher, Alexander M. Brown, Peter Saghy, Joshua J. Bohl, Jerome R. Robinson* and Daniel N. Huh*

18865

**"Catch and release" of the $\text{Cp}^{\text{N}3}$ ligand using cobalt: dissociation, protonation, and C–H bond thermochemistry**

Sanju Luhach, Roger A. Lalancette and Demyan E. Prokopchuk*

18873

**Design and synthesis of pillared metal–organic frameworks featuring olefinic fragments**

Rachel Leigh Mander, Ashley Schmidt, Michael Ruf and Maciej Damjan Korczyński*

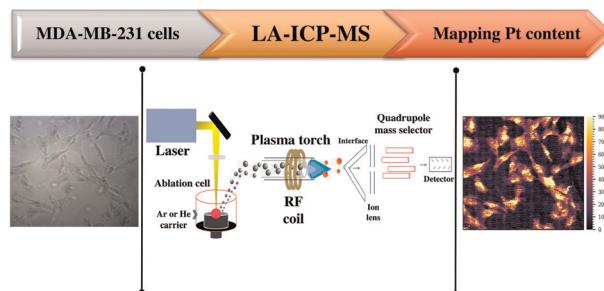


PAPERS

18880

Quantitative determination and subcellular mapping of Pt-based drugs in single breast tumour cells via laser ablation-ICP-mass spectrometry

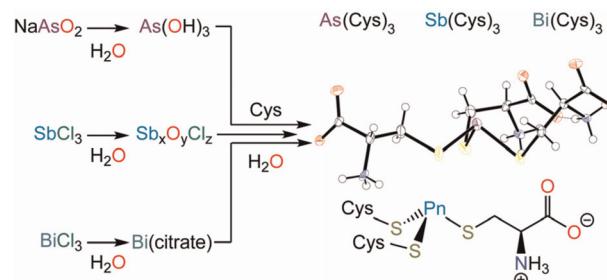
Legna Colina-Vegas, Thibaut Van Acker, Wilmer Villarreal, Olivier De Wever, Alzir Azevedo Batista, Joaquim Araújo Nóbrega and Frank Vanhaecke*



18890

Synthesis and structural characterization of the heavy tricysteinylpnictines, models of protein-bound As(III), Sb(III), and Bi(III)

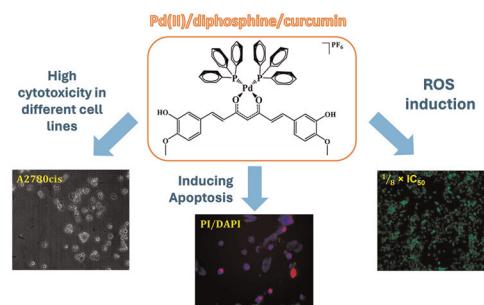
Sophia E. Hollow and Timothy C. Johnstone*



18902

Pd(II)/diphosphine/curcumin complexes as potential anticancer agents

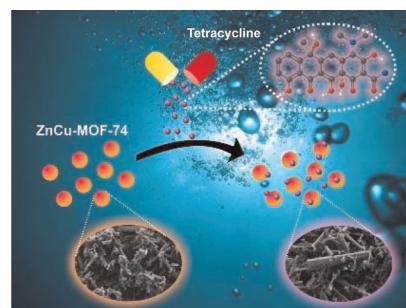
Jocely L. Dutra,* João Honorato, Angélica Graminha, Carlos André F. Moraes, Kleber T. de Oliveira, Marcia R. Cominetti, Eduardo E. Castellano and Alzir A. Batista*



18917

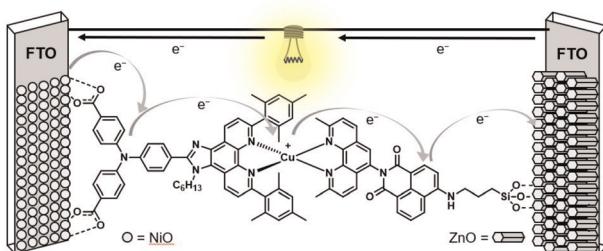
Room-temperature synthesis of bimetallic ZnCu-MOF-74 as an adsorbent for tetracycline removal from an aqueous solution

Catalina V. Flores, Andy Machín-Garriga, Juan L. Obeso, J. Gabriel Flores, Ilich A. Ibarra, Nora S. Portillo-Vélez,* Carolina Leyva* and Ricardo A. Peralta*



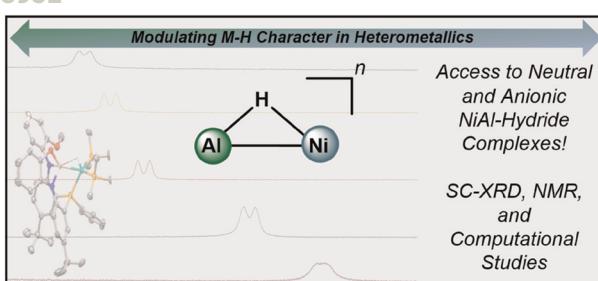
PAPERS

18923

**Charge separation in a copper(I) donor–chromophore–acceptor assembly for both photoanode and photocathode sensitization**

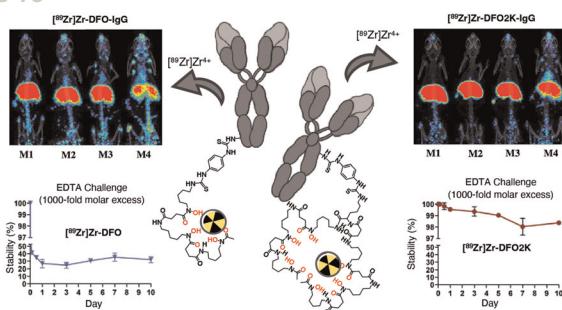
Zujhar Singh, Joseph D. Chiong, Joseph F. Ricardo-Noordberg, Saeid Kamal and Marek B. Majewski*

18932

**Synthesis and characterization of NiAl-hydride heterometallics: perturbing electron density within Al–H–Ni subunits**

Aleida G. Gonzalez, Fernando Gonzalez, Edgardo De Leon, Kaitlyn M. Birkhoff, Sam Yruegas, Haoyuan Chen* and Manar M. Shoshani*

18946

**Synthesis and evaluation of bifunctional DFO2K: a modular chelator with ideal properties for zirconium-89 chelation**

Akam K. Salih, Elaheh Khozeimeh Sarbisheh, Shvan J. Raheem, Moralba Dominguez-Garcia, Hillary H. Mehlhorn and Eric W. Price*

18963

**Exploring antiviral and antiparasitic activity of gold N-heterocyclic carbenes with thiolate ligands**

Igor S. Oliveira, Marcus S. A. Garcia, Natasha M. Cassani, Ana L. C. Oliveira, Lara C. F. Freitas, Vitor K. S. Bertolini, Jennyfer Castro, Gustavo Clauss, João Honorato, Fernanda R. Gadelha, Danilo C. Miguel, Ana C. G. Jardim and Camilla Abbehauen*

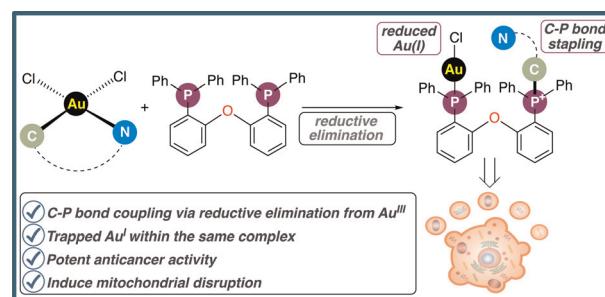


PAPERS

18974

Carbon–phosphorus stapled Au(I) anticancer agents *via* bisphosphine induced reductive elimination

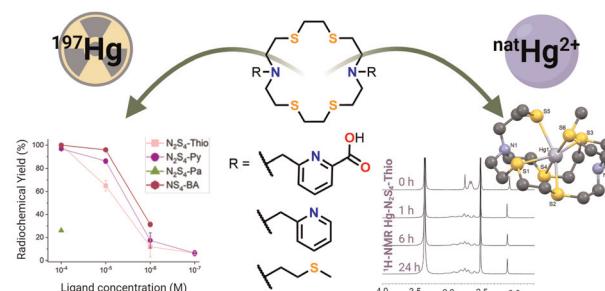
Sean T. Gilpatrick, Oluwatosin A. Obisesan, Sean Parkin and Samuel G. Awuah*



18983

Development of thiacrown ligands for encapsulation of mercury-197m/g into radiopharmaceuticals

Parmissa Randhawa, Cailum M. K. Stienstra, Shaohuang Chen, Yang Gao, Georg Schreckenbach, Valery Radchenko and Caterina F. Ramogida*



18998

Unveiling the impact of enhanced hydrophobicity of ZIF-71 on butanol purification: insights from experimental and molecular simulations

Norma Tiempos-Flores, Oscar I. Arillo-Flores, Eugenio Hernández-Fernández, Victor M. Ovando-Medina, Marco A. Garza-Navarro, Sandra Pioquito-García and Nancy E. Davila-Guzman*

