Author Profile



D. J. Mindiola

The author presented on this page has recently published his 10th article since 2000 in Angewandte Chemie: "Reactivity Studies of a Masked Three-Coordinate Vanadium(II) Complex": B. L. Tran, M. Singhal, H. Park, O. P. Lam, M. Pink, J. Krystek, A. Ozarowski, J. Telser, K. Meyer, D. J. Mindiola, Angew. Chem. 2010, 122, 10067 – 10071; Angew. Chem. Int. Ed. 2010, 49, 9871 – 9875.

Daniel J. Mindiola

Date of birth: January 31, 1974

Position: Associate Professor of Inorganic Chemistry

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Education: 1992–1996 Undergraduate university education with honors, Michigan State University, East

Lansing (USA)

1996-2000 PhD with Christopher C. Cummins, Massachusetts Institute of Technology,

Cambridge (USA)

2000–2002 Postdoctoral position with Gregory L. Hillhouse, University of Chicago, Illinois

(USA)

Awards: 2003 Camille and Henry Dreyfus New Faculty Award; 2003 NSF CAREER Award; 2004 NSF

Presidential Early Career Award for Scientists and Engineers; 2005 Camille Dreyfus Teacher-Scholar Award; 2005–2007 Alfred P. Sloan Research Fellow; 2008–2009 Dalton Transactions Americas Lectureship; 2009 Friedrich Wilhelm Bessel Research Award by the Alexander von

Humboldt Foundation; 2009 National Fresenius Award

Current research The design and assembly of reactive metal complexes of early transition metals and their role in unusual transformations such as C⁻H, C⁻N, and C⁻C bond-making and forming reactions,

especially processes relevant to important industrial processes such as hydrodenitrogenation, dehydrogenation of alkanes, and Fischer–Tropsch catalysis. Our research program is also in the pursuit of novel catalytic cycles mediated by reactive complexes that contain metal-ligand

multiple bonds.

Hobbies: Swimming, soccer, and running

If I could be anyone for a day, I would be ... Tiger Woods (before the scandal).

The greatest scientific advance of the last decade was ... making C-C bonds with alkanes.

n my opinion, the word "scientist" means ... being one lucky human being amongst approximately 400 ignorant souls.

Chemistry is fun because ... you never know where an original idea can take you.

A good work day begins with ... a hot new result in the lab.

am waiting for the day when someone will discover ... a direct and cheap route for converting N_2 to NO_3^- or an economically viable form of artificial photosynthesis.

My favorite author (fiction) is ... Gabriel García Márquez.

My 5 top papers:

- "Intermolecular C-H Bond Activation Reactions Promoted by Transient Titanium Alkylidynes. Synthesis, Reactivity, Kinetic, and Theoretical Studies of the Ti≡C Linkage": B. C. Bailey, H. Fan, J. C. Huffman, M.-H. Baik, D. J. Mindiola, J. Am. Chem. Soc. 2007, 129, 8781-8793. (An unprecedented titanium alkylidyne can engage in intermolecular C-H activation reactions, in some cases multiple times.)
- "Tellus In, Tellus Out: The Chemistry of the Vanadium Bis(telluride) Functionality": U. J. Kilgore, J. A. Karty, M. Pink, D. J. Mindiola, Angew. Chem. 2009, 121, 2430-2433; Angew. Chem. Int. Ed. 2009, 48, 2394-2397. (By accident we discovered a route to a vanadium bis(telluride) complex as well as reductive coupling reactions that invoke Te=C bond formation.)
- "Evidence for the Existence of a Terminal Imidoscandium Compound: Intermolecular C-H Activation and Complexation Reactions with the Transient Sc=NAr Ligand.": J. Scott, F. Basuli, J. C. Huffman, A. R. Fout,

- D. J. Mindiola, *Angew. Chem.* **2008**, *120*, 8630–8633; *Angew. Chem. Int. Ed.* **2008**, *47*, 8502–8505. (We present strong evidence for the existence of the terminal imido group, involving a rare-earth metal such as Sc.)
- 4. "A tribute to Frederick Nye Tebbe. Lewis acid stabilized alkylidyne, alkylidene, and imides of 3d early transition metals": J. Scott, D. J. Mindiola, *Dalton Trans.* 2009, 8463–8472. (The paper is fun to read (as it was fun to write) because it involved detective work about the work and life of Fred Tebbe.)
- 5. "Synthetic and Mechanistic Studies of Ring Opening and Denitrogenation of Pyridine and Picolines by Ti—C Multiple Bonds": A. R. Fout, D. Buck, B. C. Bailey, H. Fan, J. C. Huffman, M.-H. Baik, D. J. Mindiola, *Organometallics* 2010, 29, 5409–5422. (We outline, how a titanium alkylidyne can swap the nitrogen atom of pyridine with the alkylidyne group.)

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