

Robin S. Tanke

Areas of Experience Synthesis of organic and organometallic compounds, Homogenous and heterogeneous catalysis, Kinetic and mechanistic studies, Industrial process chemistry, Experience in the design and operation of small scale pilot plants and the transfer of technology from pilot plant studies to production facilities. Recent experience in semiconductor nanoparticles, their applications and their incorporation into undergraduate curriculum.

Professional Experience

2008 - present	Professor of Chemistry, UW-Stevens Point
2004- 2008	Associate Professor of Chemistry, UW-Stevens Point
1998 - 2004	Assistant Professor of Chemistry, UW-Stevens Point
1992 – 1998	Senior Research Chemist for Celanese Ltd.
1997 - 1998	Del Mar College Adjunct Faculty (Organic Chemistry)
1991 - 1992	N.I.H. Postdoctoral Fellow, University of Wisconsin-Madison Sponsor: Charles P. Casey

Education

1986 - 1990	Ph.D. 1990 Yale University Research Advisor: Robert H. Crabtree
1982 - 1986	B. S. Chemistry 1986 ; University of Notre Dame Research Advisor: Marvin J. Miller

List of Publications and Patents

Chemical, Electrochemical, and Theoretical Investigations of $[(Cp)Ru(CO)_3]^+$ and $[(Ind)Ru(CO)_3]^+$, Badger, R.C., D' Acchioli, J.S., Gamoke, B.C., Kim, S.B., Oudenhoven, T.A., Sweigart, D.A., Tanke, R.S.
Organometallics, **2009**, 28 (2), 418–424.

Science of Nanotechnology: An Introductory Text, Luanne Tilstra, Dan Jelski, Robin Tanke, Guoping Zhang; Allen Broughton, Alex Popov, Valentina French, Art Western, and Tom George, Nova Science Publishers, Inc. Hauppauge, NY, 2008.

1,2-bis(di(trifluoromethylphenyl)phosphino)ethane M. A. Bork; A. M. Krueger; R. S. Tanke; J. G. Brummer. *Acta. Cryst. E.* accepted, December 2007.

2-Amino-4-methylbenzothiazole R. S. Tanke, B. M. Foxman *Acta Cryst.* 2007, *E63*, o4718.

Synthesis of isolated silver nanoparticles and their aggregates manipulated by light A. K. Popov^{*}, J. Brummer, R. S. Tanke, G. Taft, M. Loth², R. Langlois, A. Wruck, R. Schmitz *Laser Physics Letters* Published Online: **16 Aug 2006**

Laser-stimulated synthesis of large fractal silver nanoaggregates. A K Popov, R S Tanke, J Brummer, M Loth, R Langlois, A Wruck, G Taft, and R Schmitz **2006, 17, Nanotechnology** 1901-1905.

Dichlorobis(triphenylphosphine oxide)magnesium. Benjamin E. Kucera, Marilyn E. Olmstead, Robin S. Tanke, Susan M. Kauzlarich, *Acta. Cryst.* **2003, E59, m359-m360.**

Synthesis of Germanium Nanoclusters with Irreversibly Attached Functional Groups: Acetals, Alcohols, Esters and Polymers. Robin S. Tanke, Susan M. Kauzlarich, Timothy E. Patten, Katherine A. Pettigrew, Drew L. Murphy, Mark E. Thompson, Howard W. H. Lee *Chem. Mater.* **2003, 15,** 1682-1689.

Addition of Iridium to the Rhodium/Inorganic iodide Catalyst System Cheung, H.; Sibrel, E. C. Tanke, R. S.; Torrence, G. P. PATENT ASSIGNEE(S):Celanese International Corporation US 6,211,405 B1 April 3, 2001.

Removal of permanganate-reducing compounds and alkyl iodides from a carbonylation process stream. Singh, Madan; Blay, George A.; Karnilaw, Michael L.; Meilchen, Melchior A.; Picard, Wayne David; Santillan, Valerie; Scates, Mark O.; Tanke, Robin Suzanne; Torrence, G. Paull; Vogel, Richard F., Jr.; Warner, R. Jay. (Hoechst Celanese Corp., USA) US 6,143,930, November 7, 2000.

"Acetic Acid" in *Ullman's Encyclopedia of Industrial Chemistry, 6th edition* 1999 Electronic Release Cheung, H.; Tanke, R. S.; Torrence, G. P.

Removal of permanganate-reducing compounds and alkyl iodides from a methanol carbonylation product stream in the manufacture of high-purity acetic acid. Singh, Madan; Blay, George A.; Karnilaw, Michael L.; Meilchen, Melchior A.; Picard, Wayne David; Santillan, Valerie; Scates, Mark O.; Tanke, Robin Suzanne; Torrence, G. Paull; Vogel, Richard F., Jr.; Warner, R. Jay. (Hoechst Celanese Corp., USA). PCT Int. Appl., 24 pp WO 9817619 A2 980430

Colloidal palladium-gold alloy catalyst for vinyl acetate production. Tanke, Robin Suzanne. (Hoechst Celanese Corporation, USA). PCT Int. Appl., 25 pp. CODEN: PIXXD2. WO 9733690 A1 970918.

Mechanism of alkyne reduction by the heterobimetallic dihydride Cp(CO)₂Re(μ-H)Pt(H)(PPh₃)₂. Casey, Charles P.; Wang, Yan; Tanke, Robin S.; Hazin, Paulette N.; Rutter, Edward W., Jr. *New J. Chem.* (1994), 18(1), 43-50.

Kinetic generation of cis-cyclopentadienyl(dicarbonyl)rhenium dihydride from the reaction of $(C_5H_5)Re(CO)_2(\mu-H)Pt(H)(PPh_3)_2$ with diphenylacetylene. Casey, Charles P.; Tanke, Robin S.; Hazin, Paulette N.; Kemnitz, Carl R.; McMahon, Robert J. *Inorg. Chem.* (1992), 31(26), 5474-9.

Ruthenium in an oxygen donor environment: properties and reactions of η^3 -(RPO(C₆H₄O)₂)₂-, η^3 -(CpCo(PO(OEt)₂)₃)₁- and η^3 -HC(POPh₂)₃ complexes of ruthenium. Tanke, Robin S.; Holt, Elizabeth M.; Crabtree, Robert H. *Inorg. Chem.* (1991), 30(8), 1714-19.

Stabilization of iridium(I), -(III), and -(V) in an oxygen-donor ligand environment and the selective dehydrogenative silylation and hydrosilylation of ethylene with {C(Ph₂P:O)₃}Ir(ol)₂. Tanke, Robin S.; Crabtree, Robert H. *Dep. Chem., Yale Univ., New Haven, CT, 06511, USA. Organometallics* (1991), 10(2), 415-18.

Iridium(I), -(III), and -(V) complexes of an O-donor ligand in alkyne hydrosilylation. Tanke, Robin S.; Crabtree, Robert H. *J. Chem. Soc., Chem. Commun.* (1990), (15), 1056-7.

Unusual activity and selectivity in alkyne hydrosilylation with an iridium catalyst stabilized by an oxygen-donor ligand. Tanke, Robin S.; Crabtree, Robert H. *J. Am. Chem. Soc.* (1990), 112(22), 7984-9.

[4,3]-Additions to α,β -unsaturated ketones via η^2 -C:C binding to a ruthenium complex. Tanke, Robin S.; Crabtree, Robert H. *Tetrahedron Lett.* (1988), 29(51), 6737-40.

Synthesis of α -amino acids by reduction of α -oximino esters with titanium(III) chloride and sodium borohydride. Hoffman, Christopher; Tanke, Robin S.; Miller, Marvin J. *J. Org. Chem.* (1989), 54(15), 3750-1.

Ring slip in associative reactions of some indenyl- and phenylcyclopentadienyliridium complexes. Habib, Afroze; Tanke, Robin S.; Holt, Elizabeth M.; Crabtree, Robert H. *Organometallics* (1989), 8(5), 1225-31.

Electrophilic sulfur transfer reactions in organic synthesis. Preparation of a diastereomer of the key macrocyclic component of griseoviridin. Liu, Li; Tanke, Robin S.; Miller, Marvin J. *J. Org. Chem.* (1986), 51(26), 5332-7