Complete List of Publications, Patents, and Book Chapters

Book Chapters

(3) Asefa, T.*; Anan, A.; Duncan, C. T.; Xie, Y. "Spherical & Anisotropic Non-Magnetic Core-shell Nanomaterials - Synthesis and Characterization" *Invited Chapter* in a Book "Non Magnetic Bi-Metallic and Metal Oxide Nanomaterials for Life Sciences", Editor: Challa S. S. R. Kumar, Wiley-VCH, Volume 3, Chapter 9, **2009**, pp. 281-330.

(2) Asefa, T.*; Anan, A.; Duncan, C. T.; Xie, Y. "Functionalized Nanoporous and Mesoporous Heterogeneous Catalysts – New Synthetic Strategies and Applications" *Invited Chapter* in a Book "Heterogeneous Catalysis Research Progress", Editor: Mathias B. Gunther, Nova Publishers, New York, Chapter 2, **2009**, pp. 81-110.

(1) Asefa, T.*; Sharma, K. K.; Anan, A.; Vathyam, R.; Buckley, R. P.; Dam, H. M.; Xie, Y.; Quinlivan, S.; Wang, G.; Duncan, C. "Efficient and Selective Nanoporous Catalysts by Placing Multiple Site-Isolated Functional Groups on Mesoporous Materials" *invited chapter* In "Nanoporous Materials" (A. Sayari and M. Jaroniec, eds.), World Scientific Publ. Co., Singapore, **2008**, pp. 497-508.

Patents:

(5) Inventors: Asefa, T. and Ozin, G. A.
"Functionalized organometallic crystalline mesoporous material prepared by metalation-condensation of organometallic compounds."
U.S. Patent: **2004**, US 2004072674
Licenced to: Exxonmobil Research and Engineering Company, USA.

(4) Inventors: Whitnall, W.; Asefa, T.; and Ozin, G. A.
"Hybrid porous organic-metal oxide materials."
PCT Int. Appl., **2005**, WO 2005087369
Licenced to: The Governing Council of the University of Toronto, Canada.

(3) Inventors: Asefa, T.*, Sharma, K. K., Anan, A.
"Efficient and selective Multifunctional Nanocatalysts by Solvent-Assisted Grafting of Organofunctional Goups on Nanoporous Materials"
Patent filed in 2008.

(2) Inventors: Asefa, T.*, Shi, Y.-L
"Corrugated and Hollow Metal Oxide and Metal/Metal-Oxide Core-Shell Microparticles by Controlled Etching"
Patent filed in 2008.

(1) Inventors: Asefa, T.*, Mishler R.; Schiff, E. A.*
"Synthetic Methods for Mesostructured and Nanoporous Materials and for Solid Acid Nanocatalysts in One-Pot by Using Phosphonated Triblock Copolymer Templates
Patent filed in 2009.

Peer-Reviewed Publications:

2009

(56) Wang, Y.; Biradar, A. V.; Duncan, C. T.; Asefa, T. * "Encapsulating Silica Nanosphere-Supported Shaped Pd Nanoparticles with Nanoporous Silica Shell: Efficient Hydrogenation and C-C Coupling Nanocatalysts" **2009**, *Submitted*.

(55) Biradar, A. A.; Biradar, A. V.; Asefa, T.* "Immobilization of Flavin-Containing Monooxygenase on Corrugated Silica Nanospheres and their Biocatalytic Activities" **2009**, *Submitted*.

(54) Wang, Y.; Asefa, T.* "Poly(allylamine)-Stabilized Colloidal Copper Nanoparticles: Synthesis, Morphology, and their Surface Enhanced Raman Scattering Properties" **2009**, *Submitted.*

(53) Sharma, K. K.; Biradar, A.; Asefa, T.* "Tandem Reactions of Sonogashira and Henry Coupling with Nanoporous Heterogeneous Catalysts" **2009**, *In Preparation*.

(52) Biradar, A. V.; Sharma, K. K.; Asefa, T.*, "Continuous and Selective Henry Reaction over Nanoporous Silica Supported-Amine Catalyst on Fixed Bed Reactor" **2009**, *Submitted*.

(51) Vathyam, R.; Wondimu, E.; Zhang, C.; Asefa, T.* "Improving Drug Adsorption and Release Properties on Nanostructured Materials with Temperature" **2009**, *Submitted*.

(50) Duncan, C. T.; Mishler, R. E.; Asefa, T.* "Widening, Exfoliation and Functionalization of Metal Oxide Nanostructures with Fluorinating Agent: A Route to Tuning Surfaces of Nanostructures" **2009***, Submitted*.

(49) Tao, Z.; Xie, Y.; Goodisman, J.;* Asefa, T.* "Isomer-Dependent Adsorption and Release of Cis- and Trans-platin Anticancer Drugs by Mesoporous Silica Nanoparticles" **2009**, *Submitted*.

(48) Mishler, R. E.; Asefa, T.*; Schiff, E. A.* "Dye Sensitized Solar Cells from Solvent-Washable Mesoporous Titania: Synthesis and their Optoelectronic Properties" **2009**, *In Preparation*.

(47) Tao, Z.; Toms, B. B.; Goodisman, J.;* Asefa, T.* "Enhancing Cytotoxicity of Platinum Anticancer Drugs by Mesoporous Silica Nanoparticles" **2009**, *Submitted*.

(46) Sharma, K. K.; Biradar, A.; Asefa, T.* "Substituent- and Catalyst-Dependent Selectivity to Aldol and Nitrostyrene Product in Heterogeneous Base Nanocatalysis" *ChemCatChem,* **2009**, *In Press*.

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(43) Mishler, R. E.; Biradar, A. A.; Duncan, C. T.; Schiff, E. A.*; Asefa, T.* "Solvent-Washable Polymer Templated Synthesis of Mesoporous Silica and Solid Acid Nanocatalysts in One-Pot" *Chem. Commun.,* **2009**, 6201.

(42) Asefa, T.*, Duncan, C. T.; Sharma, K. K. *Invited Critical Review Paper* "Recent Advances in Nanostructured Sensors and Biosensors" *Analyst,* **2009**, *134,* 1980-1990. (***The Top Most Accessed Article in September and October 2009***).

(41) Duncan, C. T.; Fleitsch, S.; Asefa, T.* "Efficient Nanoporous Silica-Supported Zn-Tropone Heterogeneous Catalyst for Intramolecular Hydroamination Reaction" *ChemCatChem*, **2009**, *1,* 365-368.

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