

Short Curriculum Vitae of Prof. Dr. Jean Marcel R. Gallo

1. Personal Information

Name: Jean Marcel Ribeiro Gallo

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2. Professional Information

- **Since August 2014 - Professor of Inorganic Chemistry** – Chemistry Department at the Federal University of São Carlos
- **Since August 2017 – Guest Scientist** – Institute of Inorganic and Analytical Chemistry at the Friedrich Schiller University of Jena
- **From September 2015 to September 2017 - Vice-coordinator of the 3^o Regional of the Brazilian Catalysis Society**
- **Since September 2017 – Coordinator of the 3^o Regional of the Brazilian Catalysis Society**

3. Academic Experience

- **March/2000-November/2003 - Bachelor in Chemistry;** Chemistry Department, State University of Campinas (Brazil);
- **March/2004-September/2005 - Master's Degree in Chemistry;** Chemistry Department, State University of Campinas (Brazil); Advisor: Prof. Dr. Ulf Schuchardt
- **November/2005-March/2010 - PhD in Sciences/Chemistry,** Cotutelle Program between the State University of Campinas (Brazil) and the University of the Eastern Piedmont “Amedeo Avogadro” (Italy); Advisors: Prof. Dr. Heloise O. Pastore and Prof. Dr. Leonardo Marchese;
- **September/2010-September/2013 - Post-Doctoral Research Associate,** Department of Chemical and Biological Engineering, University of Wisconsin-Madison (USA); Advisor: Prof. Dr. James A. Dumesic
- **December/2013-July/2014 - Post-Doctoral Research Associate,** Chemical Engineering Department, Federal University of São Carlos (Brazil); Advisor: Prof. Dr. José Maria C. Bueno

4. Research Interest

The interests of the research group lie in the design of heterogeneous catalysts for the application in the biomass conversion. The emphasis of the group is controlling the catalyst sites at an atomic level, as well as the structure at the nanometric scale aiming to tackle relevant problems associated to the refinery and the biorefinery.

5. Awards, Honors, and Fellowships

- Honorable Mention in the Congress for Undergraduate Researchers at the State University of Campinas;
- Awarded with a undergraduate research fellowship of the São Paulo Research Foundation (August 2002 to December 2003);
- Awarded with a Master's fellowship of the São Paulo Research Foundation (March 2004 to September 2005);
- Awarded with a PhD fellowship of the Italian Ministry of Education, Universities and Research (November 2005 to October 2010);
- Assigned a US Department of Energy post-doctoral fellowship (September 2010 to September 2013);
- Awarded with a post-doctoral fellowship of the São Paulo Research Foundation (December 2013 to July 2014);
- Young Investigators Award of the São Paulo Research Foundation(FAPESP) (from August 2016);
- Invited to collaborate in a Special Issue of the Journal of Brazilian Chemical Society as a Young Rising Talented Brazilian Researchers (accepted)
- 2017 Researcher in Catalysis Award by the Brazilian Society of Catalysis.

6. Publications (detailed in the List of Publications)

- (1) Ribeiro, M. C.; Osmari, T. A.; Finger, P. H.; Marques, C. P. M.; Bueno, J. M. C.; **Gallo, J. M. R.** Bifunctional Au/ZrO₂ catalyst for ethanol to ethyl acetate cascade reaction: insights on the Au structure and interaction with support; *Angewandte Chemie International Ed.* 2017, submitted.
- (2) **Gallo, J. M. R.**; A. Trapp, M. The Chemical Conversion of Biomass-Derived Saccharides: an Overview; *Journal of the Brazilian Chemical Society*, accepted, 2017.
- (3) Caldas, P. C. P.; **Gallo, J. M. R.**; Lopez-Castillo, A.; Zanchet, D.; C. Bueno, J. M. The Structure of the Cu–CuO Sites Determines the Catalytic Activity of Cu Nanoparticles; *ACS Catalysis* 2017, 2419-2424.
- (4) **Gallo, J. M. R.**; Alamillo, R.; Dumesic, J. A. Acid-functionalized mesoporous carbons for the continuous production of 5-hydroxymethylfurfural; *Journal of Molecular Catalysis A: Chemical* 2016.
- (5) Zanchet, D.; Santos, J. B. O.; Damyanova, S.; **Gallo, J. M. R.**; Bueno, J. M. C. Toward Understanding Metal-Catalyzed Ethanol Reforming; *ACS Catalysis* 2015, 5, 3841-3863.
- (6) Schuchardt, U.; **Gallo, J. M. R.** In *Catalytic Hydrogenation for Biomass Valorization*; The Royal Society of Chemistry: 2015, p 242-252.
- (7) Mellmer, M. A.; **Gallo, J. M. R.**; Alonso, D. M.; Dumesic, J. A. Selective Production of Levulinic Acid from Furfuryl Alcohol in THF Solvent Systems over H-ZSM-5; *ACS Catalysis* 2015, 5, 3354-3359.
- (8) Freitas, I. C.; **Gallo, J. M. R.**; Bueno, J. M. C.; Marques, C. M. P. The Effect of Ag in the Cu/ZrO₂ Performance for the Ethanol Conversion; *Topics in Catalysis* 2015, 59, 357-365.
- (9) Mellmer, M. A.; Sener, C.; **Gallo, J. M. R.**; Luterbacher, J. S.; Alonso, D. M.; Dumesic, J. A. Solvent effects in acid-catalyzed biomass conversion reactions; *Angewandte Chemie. International Ed. In English* 2014, 53, 11872-11875.
- (10) Mellmer, M. A.; Alonso, D. M.; Luterbacher, J. S.; **Gallo, J. M. R.**; Dumesic, J. A. Effects of gamma-valerolactone in hydrolysis of lignocellulosic biomass to monosaccharides; *Green Chemistry* 2014, 16, 4659-4662.
- (11) **Gallo, J. M. R.**; Bueno, J. M. C.; Schuchardt, U. Catalytic Transformations of Ethanol for Biorefineries; *Journal of the Brazilian Chemical Society* 2014, 25, 2229-2243.
- (12) Dumesic, J. A.; **Gallo, J. M. R.**; Alonso, D. M.; US20140107355A1: USA, 2014.
- (13) Jackson, D. H. K.; Wang, D.; **Gallo, J. M. R.**; Crisci, A. J.; Scott, S. L.; Dumesic, J. A.; Kuech, T. F. Amine Catalyzed Atomic Layer Deposition of (3-Mercaptopropyl)trimethoxysilane for the Production of Heterogeneous Sulfonic Acid Catalysts; *Chemistry of Materials* 2013, 25, 3844-3851.
- (14) Gurbuz, E. I.; **Gallo, J. M. R.**; Alonso, D. M.; Wettstein, S. G.; Lim, W. Y.; Dumesic, J. A. Conversion of hemicellulose into furfural using solid acid catalysts in gamma-valerolactone; *Angewandte Chemie. International Ed. In English* 2013, 52, 1270-1274.
- (15) **Gallo, J. M. R.**; Alonso, D. M.; Mellmer, M. A.; Yeap, J. H.; Wong, H. C.; Dumesic, J. A. Production of Furfural from Lignocellulosic Biomass Using Beta Zeolite and Biomass-Derived Solvent; *Topics in Catalysis* 2013, 1-7.
- (16) **Gallo, J. M. R.**; Alonso, D. M.; Mellmer, M. A.; Dumesic, J. A. Production and upgrading of 5-hydroxymethylfurfural using heterogeneous catalysts and biomass-derived solvents; *Green Chemistry* 2013, 15, 85.
- (17) de Souza, M. O.; de Souza, R. F.; Rodrigues, L. R.; Pastore, H. O.; Gauvin, R. M.; **Gallo, J. M. R.**; Favero, C. Heterogenized nickel catalysts for propene dimerization: Support effects on activity and selectivity; *Catalysis Communications* 2013, 32, 32-35.

- (18) Carrasquillo-Flores, R.; **Gallo, J. M. R.**; Hahn, K.; Dumesic, J. A.; Mavrikakis, M. Density Functional Theory and Reaction Kinetics Studies of the Water-Gas Shift Reaction on Pt-Re Catalysts; *Chemcatchem* 2013, 5, 3690-3699.
- (19) Alonso, D. M.; **Gallo, J. M. R.**; Mellmer, M. A.; Wettstein, S. G.; Dumesic, J. A. Direct conversion of cellulose to levulinic acid and gamma-valerolactone using solid acid catalysts; *Catalysis Science & Technology* 2013, 3, 927-931.
- (20) Alamillo, R.; Crisci, A. J.; **Gallo, J. M. R.**; Scott, S. L.; Dumesic, J. A. A tailored microenvironment for catalytic biomass conversion in inorganic-organic nanoreactors; *Angewandte Chemie. International Ed. In English* 2013, 52, 10349-10351.
- (21) Pagan-Torres, Y. J.; Wang, T. F.; **Gallo, J. M. R.**; Shanks, B. H.; Dumesic, J. A. Production of 5-Hydroxymethylfurfural from Glucose Using a Combination of Lewis and Bronsted Acid Catalysts in Water in a Biphasic Reactor with an Alkylphenol Solvent; *ACS Catalysis* 2012, 2, 930-934.
- (22) Pagán-Torres, Y. J.; **Gallo, J. M. R.**; Wang, D.; Pham, H. N.; Libera, J. A.; Marshall, C. L.; Elam, J. W.; Datye, A. K.; Dumesic, J. A. Synthesis of Highly Ordered Hydrothermally Stable Mesoporous Niobia Catalysts by Atomic Layer Deposition; *ACS Catalysis* 2011, 1, 1234-1245.
- (23) **Gallo, J. M. R.**; Icardi, U. A.; Baglio, V.; Coralli, A.; Graizzaro, A. Implementation and optimization of the HySyLab DMFC single cell test station; *International Journal of Hydrogen Energy* 2011, 36, 8082-8087.
- (24) **Gallo, J. M. R.**; Gatti, G.; Graizzaro, A.; Marchese, L.; Pastore, H. O. Novel mesoporous carbon ceramics composites as electrodes for direct methanol fuel cell; *Journal of Power Sources* 2011, 196, 8188-8196.
- (25) **Gallo, J. M. R.**; Bisio, C.; Marchese, L.; Pastore, H. O. One-pot synthesis of mesoporous [Al]-SBA-16 and acidity characterization by CO adsorption; *Microporous and Mesoporous Materials* 2011, 145, 124-130.
- (26) **Gallo, J. M. R.**; Bisio, C.; Gatti, G.; Marchese, L.; Pastore, H. O. Physicochemical Characterization and Surface Acid Properties of Mesoporous [Al]-SBA-15 Obtained by Direct Synthesis; *Langmuir* 2010, 26, 5791-5800.
- (27) de Souza, M. O.; Rodrigues, L. R.; Gauvin, R. M.; de Souza, R. F.; Pastore, H. O.; Gengembre, L.; Ruiz, J. A. C.; **Gallo, J. M. R.**; Milanesi, T. S.; Milani, M. A. Support effect in ethylene oligomerization mediated by heterogenized nickel catalysts; *Catalysis Communications* 2010, 11, 597-600.
- (28) **Gallo, J. M. R.**; Pastore, H. O.; Schuchardt, U. Study of the effect of the base, the silica and the niobium sources on the [Nb]-MCM-41 synthesized at room temperature; *Journal of Non-Crystalline Solids* 2008, 354, 1648-1653.
- (29) **Gallo, J. M. R.**; Bisio, C.; Marchese, L.; Pastore, H. O. Surface acidity of novel mesostructured silicas with framework aluminum obtained by SBA-16 related synthesis; *Microporous and Mesoporous Materials* 2008, 111, 632-635.
- (30) **Gallo, J. M. R.**; Teixeira, S.; Schuchardt, U. Synthesis and characterization of niobium modified montmorillonite and its use in the acid-catalyzed synthesis of beta-hydroxyethers; *Applied Catalysis a-General* 2006, 311, 199-203.
- (31) **Gallo, J. M. R.**; Pastore, H. O.; Schuchardt, U. Silylation of [Nb]-MCM-41 as an efficient tool to improve epoxidation activity and selectivity; *Journal of Catalysis* 2006, 243, 57-63.
- (32) **Gallo, J. M. R.**; Paulino, I. S.; Schuchardt, U. Cyclooctene epoxidation using Nb-MCM-41 synthesized at room temperature; *Recent Advances in the Science and Technology of Zeolites and Related Materials, Pts a - C* 2004, 154, 2945-2950.
- (33) **Gallo, J. M. R.**; Paulino, I. S.; Schuchardt, U. Cyclooctene epoxidation using Nb-MCM-41 and Ti-MCM-41 synthesized at room temperature; *Applied Catalysis a-General* 2004, 266, 223-227.

7. Editor

Guest editor, Journal of Molecular Catalysis A: General (2015-2016), Special Issue in Honor of Prof. Ulf Schuchardt 70 birthday.

8. Citations and H index

H index Web of Science: 16

H index Google Scholar: 18

Citations Web of Science: 1055

Citations Google Scholar: 1314

9. Invited lectures

1) “**Al containing SBA-15 and SBA-16: Synthesis and acid sites characterization**”, 1 h lecture, 05/16/2011, Max-Planck-Institut, Mülheim an der Ruhr, Germany; 2) “**Production of 5-Hydroxymethylfurfural from Glucose Using Biomass-Derived Solvents**”, 1 h lecture, 27/11/2012, University of Toledo, Toledo, USA; 3) “**Design of heterogeneous catalysts for biomass conversion**”, 1 h lecture, XIII Brazilian Materials Society Meeting, 29/09/2014, João Pessoa, Brazil; 4) “**Design and application of heterogeneous catalysts for the conversion of biomass**”, 1 h lecture., 35° Summer School in Chemistry at the Federal University of São Carlos, 05/02/2015, São Carlos, Brazil; 5) “**Biomass conversion into chemicals: a growing field for chemical engineers**”, 2 h lecture, International Chemical Engineering Meeting – RNX, 06/03/2015, Monterrey, Mexico; 6) “**Use of inorganic solids as heterogeneous catalysts in biorefineries**”, 1 h lecture, 38° Annual Conference of the Brazilian Society of Chemistry, 26/05/2015, Aguas de Lindoia, Brazil; 7) “**Catalysis and Sustainability**”, 6 h lecture, XII Week of Chemistry at the Federal University of São Carlos, 06/08/2015, São Carlos, Brazil; 8) “**Design of heterogeneous catalysts for biomass conversion**” 1 h lecture, VIII Academic Symposium in Chemistry, 27/09/2015, Viçosa, Brazil; 9) “**Biomass as feedstock for chemicals**”, 2 h lecture, Chemistry Department at the State University of Campinas, 06/10/2015, Campinas, Brazil; 10) “**Molecular sieves as catalysts for biorefineries**” 1 h lecture, 3rd Cycle of Seminars in Molecular Sieves, 12/11/2015, Campinas, Brazil; 11) “**Chemical Catalysis**”, 16 h course, 36° Summer School in Chemistry at the Federal University of São Carlos, 25-29/01/2016, São Carlos, Brazil; 12) “**Zeolites as catalysts in biorefinery: beyond the Brønsted acidity**”, 1.5 h lecture, School Pre 18th International Zeolite Conference, 18/06/2016, Campinas, Brazil.

10. Teaching

Undergraduate: Inorganic Chemistry; Applied Inorganic Chemistry; Chemical Catalysis; Experimental Inorganic Chemistry; **Graduate School:** Fundamentals of Catalysis;