

Candidate application to the ISGS Board of Directors

Prof. / Dr. Ubirajara Pereira Rodrigues Filho

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CV with main research interests

Associate Professor at the Hybrid and Inorganic Materials Group, Institute of Chemistry of Sao Carlos, University of Sao Paulo, Sao Carlos, Brazil. 2010. BSc in Chemistry at Universidade Federal do Paraná, Curitiba, Brazil. 1990. MSc (1993) and PhD (1996) in Inorganic Chemistry at State University of Campinas (UNICAMP). Post-doc fellowship at Facultés Universitaire Notre-Dame de La Paix (Namur, Belgium) on XPS, HREELS, FT-Raman Study of Phosphotungstate/Cellulose Esters Nanocomposites. 1997-1998. Assistant Professor at the Chemistry Department at Federal University of Santa Catarina (UFSC), Florianópolis, 1996-1997. Assistant Professor at the Inorganic and Analytical Chemistry Group, Institute of Chemistry of Sao Carlos, University of Sao Paulo, Sao Carlos, Brazil, 1998-2010. Invited Researcher The Royal Veterinary and Agriculture University of Copenhagen, Denmark. 2001. Charge de Recherche at the Laboratoire de Physique de la Matière Condensée, École Polytechnique, Palaiseau, France. 2004-2005 and 2008. Reviewer for Journal of Colloid and Interface Science; Journal of the Brazilian Chemical Society (0103-5053); Journal of Applied Polymer Science; Physical Chemistry Chemical Physics; Química Nova; Polymer (Guildford); Journal of Nanoscience and Nanotechnology; Journal of Materials Chemistry; Chemical Communications. The main research interests are polyoxometalate chemistry, sol-gel chemistry, nanocomposite and hybrid materials, photochromism and photocatalysis, inhibition of biofilm formation by sol-gel coating, fuel cell, CO₂ capture and use as a raw material for materials synthesis, nanoparticle synthesis by sol-gel chemistry, water gas-shift reaction, (bio)sensor, self-assembling.

5 recent publications

- 1- Ferreira-Neto, E.P. ; CARVALHO, F. L. S. ; Ullah, Sajjad ; ZOLDAN, V. C. ; PASA, A. A. ; SOUZA, Adriano Lopes ; Battirola, Liliane C. ; Rudolf, P. ; Bilmes, S.A. . Surface structure and reactivity study of phosphotungstic acid-nitrogenated ormosils. *Journal of Sol-Gel Science and Technology*, v. 1, 2013.
- 2- Ullah, Sajjad ; Acuña, Jose J S ; PASA, A. A. ; Bilmes, S.A. ; Vela, Maria E. ; Benitez, Guillermo ; Rodrigues-Filho, Ubirajara Pereira . Photoactive Layer-by-Layer films of Cellulose Phosphate and Titanium dioxide containing Phosphotungstic acid. *Applied Surface Science*, p. 111-120, 2013.
- 3- Chazalviel, J.-N. ; Rodrigues-Filho, U.P. . On the SiO infrared absorption of polysiloxane films. *Thin Solid Films*, v. 520, p. 3918-3921, 2012.
- 4- Prieto, Mauricio J. ; Rodrigues Filho, Ubirajara P. ; Landers, Richard ; Tremiliosi-Filho, Germano . The ethanol electrooxidation at Pt layers deposited on polycrystalline Au. *PCCP. Physical Chemistry Chemical Physics (Print)*, v. 1, p. 1-5, 2012.
- 5- de Oliveira, M., de Souza, A. Lopes, SCHNEIDER, J., Rodrigues Filho, Ubirajara Pereira. Local Structure and Photochromic Response in Ormosils Containing Dodecatungstophosphoric Acid. *Chemistry of Materials*. , v.23, p.953 - 963, 2011.

Statement of interest

Working on the field of nanocomposite materials, nanomaterials synthesis and surface modification my experience on sol-gel processes back to the period of my PhD. Back to those days we were interest on prepare cellulose and cellulose derivatives modified with zirconia and titania with Professor Yoshitaka

Gushikem at the State University of Campinas. Later on our interest was divided on surface modification of semiconductors and Synthesis of nanocomposite/hybrid materials. Nowadays, we run a laboratory dedicated to the design of new synthetic routes for inorganic nanoparticles, nanocomposites and hybrid materials by sol-gel technique at University of São Paulo at São Carlos city. We are also co-organizing a Sol-Gel Symposium at the Annual Meeting of the Brazilian Materials Research Society (B-MRS) to be held at Campos do Jordão, São Paulo State, on October 2013. Being an active member of the Brazilian community on sol-gel and strong international collaboration with researchers in Europe and South America and given the increasing importance of Brazil in the World Global Scenarion we believe we can contribute to the International Sol-Gel Society (ISGS) helping on the divulgation of the Sol-Gel science and Technology and increasing the number members in the Latin America Region by organizing regional events bringing together students and scientists in this field.

Therefore, we would like to offer our name as an option to be part of the Board of the Directors of the International Sol-Gel Society.