

# Curriculum Vitae: Cléo Thomás Gabriel Vilela Menegaz Teixeira Pires

Address(es): Núcleo Rural de Taguatinga, Chácara 30, Brasília, DF, Brazil and Via Romolo Amaseo, 3, 12 Bologna, Italy.

Nationalities: Brazilian and Italian Birth: 07<sup>th</sup> February 1983

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## Education and training

- ❖ Ph.D. in Science (Inorganic Chemistry), Aug/2006–Aug/2010, Title: Synthesis and pilarization of layered silicic acids, Institute of Chemistry, University of Campinas – UNICAMP, Campinas, SP, Brazil.
- ❖ M.Sc. in Inorganic Chemistry, Aug/2004–Aug/2006, Disseratation Title: Synthesis and characterization of microporous carbon from replication of the zeolites with FAU and MWW structures, UNICAMP, 13083-970 Campinas, SP, Brazil.
- ❖ B. Sc. in Chemistry, Mar/2001–Jul/2004, Brasília University - UnB, Brasília, DF, Brazil.

## Work experience

(Dates, Occupation or position held, Main activities and responsibilities, Name and address of employer, Type of business or sector)

- May 2023 – Current, Scholar researcher – Grantee of Coimbra Group Scholarships, Brazil nut tegument as material for energy storage applications, Chemistry Department, University of Bologna Alma Mater, 40126 Bologna, Italy, University.
- August 2022 – Current, Researcher - Postdoctoral Fellow at Physical Chemistry Department – Grantee of Shell, Electrooxidation of biomass-derived resources, Institute of Chemistry, University of Campinas – UNICAMP, 13083-970 Campinas, SP, Brazil, University.
- April-June 2022, Substitute Associate Professor, Chemistry courses teaching for Pharmacy Undergraduate students, Universidade Federal do Oeste do Pará (UFOPA), Rua Vera Paz, s/n (Unidade Tapajós), 68035-110, Santarém, PA, Brazil, University.
- August 2017 – Current, graduation courses evaluator, natural sciences and engineering – Guia do estudante, Editora Abril.
- January 2015 – Current, Scientific Director, Research and Execution of Technical and Scientific Projects related with Environmental Remediation, Vidárvore Association, Ch. 30, Núcleo rural de Taguatinga, Qd 614, Samambaia Norte, DF, Brazil, Non-Governmental Organization.
- October 2016 – 2021, Collaborator Researcher - Physical Chemistry Department, Glycerol electro-oxidation on Au, Pt or Pd decorated with Pb, Sb, Bi, Co and Cu metals: materials electro-synthesis and mechanistic oxidation studies by on-line HPLC, Institute of Chemistry, University of Campinas – UNICAMP, 13083-970 Campinas, SP, Brazil, University.
- March 2018 – December 2018, Substitute Professor, General and Inorganic Chemistry Teaching for Undergraduate students, Universidade Estadual Paulista (UNESP) Avenida 24A, 1515, Rio Claro–SP Brazil 13506-900, University
- March 2018 – August 2018, Researcher Fellow, Research on CO<sub>2</sub> electro-reduction catalysed by shape controlled nanoparticles supported on Gas diffusion electrodes. Help students and colleagues on their research involving mainly corrosion and nanoparticles synthesis, National Laboratory of Nanotechnology (LNNano), Rua Giuseppe Máximo Scolfaro, 10000 Polo II de Alta Tecnologia de Campinas, Campinas–SP Brazil 13083-970, Research National Laboratory.
- October 2017 – October 2017, Substitute Professor, Applied Calculus Teaching for Undergraduate students, Agronomy Special Class, State University of Mato Grosso – UNEMAT, Campus Juara, 78575-000 Rodovia Juara- Brasnorte Km 02 MT, Brazil, University
- August 2016 – July 2017, Substitute Professor, General and Inorganic Chemistry Teaching for Undergraduate students, Department of Natural Sciences, Mathematics and Education of Araras - DCNME-Ar, Federal University of São Carlos - UFSCar, 13600-970 Rodovia Anhanguera, Km 174, Araras SP, Brazil, University.
- August 2014 – November 2015, Educational Consultant and Educational Researcher, Undergraduate research coordination coordination (Perchlorate production from C/PbO<sub>2</sub> electrosynthesis) and and teaching, Department of Chemistry, Division of Fundamental Sciences, Aeronautic Technological Institute - ITA, 12228-900 São José dos Campos, SP, Brazil, University.
- August 2014 – December 2014, Volunteer Professor, Teach general Chemistry for chemistry students, Institute of Chemistry, University of Campinas – UNICAMP, 13083-970 Campinas, SP, Brazil, University.
- November 2010 – February 2015, Researcher - Postdoctoral Fellow at Inorganic Chemistry – Grantee of CNPq, Modification and characterization of layered materials, Institute of Chemistry, University of Campinas – UNICAMP, 13083-970 Campinas, SP, Brazil, University.
- November 2012 – June 2013, Editorial Assistant, Final review and English correction at scientific papers, Journal of the Brazilian Chemical Society, 13083-970 Campinas, SP, Brazil, Peer-review Journal.
- March 2012 – July 2012, Volunteer Professor, Teach general Chemistry for biology and interdisciplinary students, Institute of Chemistry, University of Campinas – UNICAMP, 13083-970 Campinas, SP, Brazil, University.
- August 2006 – August 2010, Researcher - Ph.D. Student at Science (Inorganic Chemistry) - Grantee of FAPESP, Synthesis and characterization of layered materials, Institute of Chemistry, University of Campinas – UNICAMP, 13083-970 Campinas, SP, Brazil, University.
- October 2008 – March 2009 and September 2009 – February 2010 - Grantee of EBW, Researcher - Ph.D. Exchange Internship, Photocatalyst production and photophysical studies, Instituto de Tecnología, Química (UPV-CSIC), Universidad Politécnica, de Valencia, Avenida Los Naranjos, Valencia, Valencia 46022, Spain, University.
- March 2007 – July 2008, Graduate Teaching Assistant – General Chemistry - Grantee of Unicamp, Supervised Teaching Program, Institute of Chemistry, University of Campinas – UNICAMP, 13083-970 Campinas, SP, Brazil, University.
- August 2004 – August 2006, Researcher - Master Student at Inorganic Chemistry - Grantee of CAPES, Synthesis and characterization of carbon molecular sieves and related materials, Institute of Chemistry, University of Campinas – UNICAMP, 13083-970 Campinas, SP, Brazil, University
- September 2003 - July 2004, Researcher - Scientific Internship Research Program - Grantee of CNPq, Project Title: Cu, Cr and As determinations in treated wood with CCA by atomic absorption spectroscopy, Dr. Marcos Antonio Eduardo Santana, LPF, IBAMA, Brasília, DF, Brazil, Federal environmental research and protection agency.

- August 2002 - July 2003, Researcher - Scientific Internship Research Program - Grantee of CNPq, Project Title: Acidity study of zeolites, Prof. Dr. Silvia Claudia Loureiro Dias, Brasilia University, Brasilia, DF, Brazil, University.
- April 2001 - July 2002, Researcher - Scientific Extension Internship Research Program - Grantee of DEX-UnB, Project Title: Interdisciplinary project of sciences Education, Extension Direction, Brasilia University, Brasilia, DF, Brazil, University.
- March 2002 - November 2002 and March 2004 – July 2004, Undergraduate Teaching Assistant – Physics 1 for Chemists, Thermodynamic Chemistry and Analytical Chemistry 1, Supervised Aid Teaching Program, Brasilia University, Brasilia, DF, Brazil, University.
- September 2001 - July 2002, Laboratory assistant, Toxicological essay with agrochemicals, Bioagri Laboratories, Brasilia University, Brasilia, DF, Brazil, Private Research Company at Toxicology.

## Skills and competences

### Mother tongue: Portuguese

Other language(s)	Understanding				Speaking				Writing	
	Listening		Reading		Spoken interaction		Spoken production			
<b>English</b>	C2	Proficient user	C2	Proficient user	C2	Proficient user	C1	Proficient user	C2	Proficient user
<b>Spanish</b>	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user
<b>Italian</b>	C1	Proficient user	C2	Proficient User	C1	Proficient User	B2	Independent User	C1	Proficient User
<b>French</b>	B2	Independent user	B2	Independent user	B1	Independent User	A2	Basic User	B1	Independent User
<b>Catalan</b>	B2	Independent user	B2	Independent user	A2	Basic User	A1	Basic User	B1	Independent user
<b>German</b>	A2	Basic User	B1	Independent user	A2	Basic User	A1	Basic User	A2	Basic User
<a href="#">Common European Framework of Reference for Languages</a> - Self-assessment level										

### Technical skills and competences

Good ability to operate equipment, such as the Scanning and Transmission Electronic Microscopes; FTIR, Atomic Absorption Spectrophotometer, Raman, Fluorimeter, Laser Flash Photolysis, HPLC, Solid State NMR, Potentiometers, X-rays diffractometer and spectrometer, Potentiostat, Isothermal Calorimetric Titration, and UV-Vis spectroscopy.

### Computer skills and competences

Good command of Microsoft Office (Word, Excel, Power Point and Publisher);

Domain of Oringin Lab TM software;

Good command of Chemometrics softwares (Pirouette, Sci Lab, and Unscrambler);

Good command of EXASPAK program.

Basic knowledge of graphic design application, chemistry programs and programing (Adobe PhotoShop, Dreonweaver, Fireworks, iSpring Suite, Snagit, Hyperchem, Mestre C, Digtan, Pascal...).

## Publications

### Papers

- Lima, C C ; Soares, L C ; Yukuhiro, V Y ; Silva, A B S ; Landers, R ; de Figueiredo, P B S ; de Lima, R B ; Arruda, M A Z ; Longo, C ; Pires C T G V M T ; Fernández, P S, Glycerol (photo)electro-oxidation on carbon supported Ag nanoparticles modified 1 with low amounts of Pt. Activity, selectivity and the effect of visible-light 2 irradiation, ChemRxiv/ACS Interface Applied Materials (submitted), 2022/2023. doi 10.26434/chemrxiv-2022-b76n2
- Perini, N; Hessel, C; Bott-Neto, J L; Pires, C T G V M T; Fernández, P S; Sitta, E, Photoelectrochemical Oxidation of Glycerol on Hematite: Thermal Effects, In situ FTIR and Long-term HPLC Product Analysis. Photoelectrochemical Oxidation of Glycerol on Hematite: Thermal Effects, In situ FTIR and Long-term HPLC Product Analysis, Journal of Solid State Electrochemistry, 25, 2021, 1101–1110. doi 10.1007/s10008-020-04878-7
- Galante, M T; Santiago, P V B; Yukuhiro, V Y; Silva, L A; dos Reis, N A; Pires, C T G V M T; Macedo, N G; Costa, L S; Fernandez, P S; Longo, C, Aminopolysiloxane as Cu<sub>2</sub>O Photocathode Overlayer: Photocorrosion Inhibitor and Low Overpotential CO<sub>2</sub>-to-formate Selectivity Promoter, ChemCatChem, 13, 3, 2020, 859-863. doi 10.1002/cctc.202001638.
- Soffiati, G; Bott-Neto, J L; Yukuhiro, V Y; Pires, C T G V M T; Lima, C C; Zanata, C R; Birdja, Y Y; Koper, M T M; San-Miguel, M A; Fernández, P S, Electrooxidation of C<sub>4</sub> polyols on platinum single-crystals: A computational and electrochemical study. The Journal of Physical Chemistry C, 124, 27, 2020, 14745-14751. doi 10.1021/acs.jpcc.0c05017
- de Souza, M B C; Vicente, R A; Yukuhiro, V Y; Pires, C T G V M T; J; Fernández P S, Pb and Bi-modified Pt electrodes towards Glycerol Electrooxidation in Alkaline media. Activity, Selectivity and the importance of the Pt atoms arrangement. ACS Catalysis, 10, 2020, 2131-2137. doi 10.1021/acscatal.9b04805

- Lima, C C; Rodrigues, M V F; Neto, A F M; Zanata, C R; Pires, C T G V M T; Souza, L C; Solla-Gullón, J; Fernández P S, Highly active Ag/C nanoparticles containing ultra-low quantities of sub-surface Pt for the electrooxidation of glycerol in alkaline media, *Applied Catalysis B: environmental*, 279, 2020, 119369. doi 10.1016/j.apcatb.2020.119369
- de Souza, M B C; Vicente, R A; Yukuhiro, V Y; Pires, C T G V M T; Cheuquepán, W; Solla-Gullón, J; Fernández P S, Bi-modified Pt electrodes towards glycerol electrooxidation in alkaline solution: effects on activity and selectivity. *ACS Catalysis (inside cover)*, 9, 2019, 5104-5110. doi 10.1021/acscatal.9b00190
- Ahmed, K; Khan, A J; Pires, C T G V M T; Yamin, M; Rehman, F; Rahim, A; J. Song ; Airoidi, C. Fabrication of layered Al-silicate Magadiites for the Removal of reactive dyes from Textile effluents. *Desalination and Water Treatment*, 104, 2018, 159-168. doi 10.5004/dwt.2018.21801
- Pires, C T G V M T; Pinto, A A; Souza, K S; Airoidi, C; Mercaptopropyl grafted magadiite for lead and cadmium sorption and calorimetric determination. *Journal of Thermal Analysis and Calorimetry*, 126, 2016, 1513-1520. doi 10.1007/s10973-016-5684-3
- Ahmed, K; Rehman, F; Pires, C T G V M T; Rahim, A; Santos, A L; Airoidi, C; Aluminum doped mesoporous silica SBA-15 for the removal of remazol yellow dye from water. *Microporous and Mesoporous Materials*, 236, 2016, 167-175. doi 10.1016/j.micromeso.2016.08.040
- Melo Jr, M A; Pires, C T G V M T; Airoidi, C; The influence of the leaving iodine atom on phyllosilicate syntheses and useful application in toxic metal removal with favorable energetic effects. *RSC Advances*, 4, 2014, 41029-41038. doi 10.1039/c4ra06615d
- Pires, C T G V M T; Vilela, J A P; Airoidi, C; The effect of Chitin Alkaline Deacetylation at Different Condition on Particle Properties. *Procedia Chemistry*, 9, 2014, 220-225. doi 10.1016/j.proche.2014.05.026
- Pires, C T G V M T; de Melo, J C P; Airoidi, C; A useful synthetic route to yield silver-nanoparticles on phyllosilicates and morphologic structural investigations. *Advanced Materials Research*, 699, 2013, 624-629. doi 10.4028/www.scientific.net/AMR.699.624
- Pires, C T G V M T; Airoidi, C; <sup>1</sup>H NMR Spectroscopy Study of Sorbed Water on Layered Ilerite Surface. *AIP Conferences Proceedings*, 1536, 2013, 1071-1072. doi 10.1063/1.4810605
- Moscofian, A S O; Pires, C T G V M T; Vieira A P; Airoidi, C; Reactive dyes removal using organofunctionalized mesoporous silica. *Journal of Porous Materials*, 20, 2013, 1179-1188. doi 10.1007/s10934-013-9701-7
- Pires, C T G V M T; Oliveira Junior, N G; Airoidi, C; Structural incorporation of titanium and/or aluminum in layered silicate magadiite through direct syntheses. *Materials Chemistry and Physics*, 135, 2012, 870-879. doi 10.1016/j.matchemphys.2012.05.072
- Almeida, R K S; Pires, C T G V M T; Airoidi, C; The influence of secondary structure directing agents on the formation of mesoporous SBA-16 silicas. *Chemical Engineering Journal*, 203, 2012, 36-42. doi 10.1016/j.cej.2012.06.114
- Pires, C T G V M T; Costa, J R; Airoidi, C; Isomorphic silicon/aluminum substitution on layered ilerite - Structural study and calorimetry of copper interaction. *Microporous and Mesoporous materials*, 163, 2012, 1-10. doi 10.1016/j.micromeso.2012.06.040
- Moscofian, A S O; Pires, C T G V M T; Vieira A P; Airoidi, C; Organofunctionalized magnesium phyllosilicates as mono- or bifunctional entities for industrial dyes removal. *RSC Advances*, 2, 2012, 3502-3511. doi 10.1039/C2RA00935H
- Oliveira E C; Pires, C T G V M T; Pastore, H O; Why Are Carbon Molecular Sieves Interesting? *Journal of the Brazilian Chemical Society*, 17, 2006, 16-29. doi 10.1590/S0103-50532006000100003
- Pires, C T G V M T; Oliveira, E C; Pastore, H O; "Carbon Molecular Sieves: new synthesis routes and spectroscopic studies" *Anais do Congresso Brasileiro de Catalise (ISSN 1980-9263)*, v. 3. 2005, 1624-1629.

#### **Patent**

- Pastore, H O; Pires, C T G V M T; Oliveira -Munsignatti, E C.; Manufacturing process for carbon molecular sieves with morphology control - Processo de produção de peneiras moleculares de carbono com controle morfológico e peneiras moleculares de carbono microporosas. *Brazilian Patent PI0700985-2*, 2007.

#### **Book Chapter**

- Pires, C T G V M T; Airoidi, C; Functionalized Mesoporous and Nanoporous Materials. *Handbook of Functional nanomaterials*, Vol. 2 Characterization and Reliability, Nova Science Publishers, New York, 2013, Chapter 20, 485-506.
- Pires, C T G V M T; Marín, M L; Miranda, M A; Airoidi, C.; Photocatalytic degradation of the pesticide methidathion by the layered silicate magadiite pillared with titanium oxide. *Topics in Chemistry and Material Science*, v. 6, 2011, 9-20.

#### **Conferences complete works**

- Ahmed, K; Pires, C T G V M T; Riaz, A; Airoidi, C; Study the Effect of Basic Dye Sorption on Different Chemically Modified SBA-15. *Proceedings of the Pure and Applied Chemistry International Conference 2013*, Chon Buri, Thailand, p 769-772, 2013.
- Pires, C T G V M T; de Oliveira Jr., N G; Melo Jr., M A; Airoidi, C; Exfoliated Talc-Like Nickel Amine Functionalized Phyllosilicates: Synthesis and CO<sub>2</sub> Sorption and Thermodynamics Effects. *Proceedings of the Pure and Applied Chemistry International Conference 2013*, Chon Buri, Thailand, p 765-768, 2013.
- Pires, C T G V M T; Cossielo, R F; Iamazaki, E T; Atvars, T D Z; Pastore, H O.; "Photophysical study of Anthracene and Pyrene Adsorption on MCM-22 Zeolite", 6<sup>th</sup> Encontro Brasileiro sobre Adsorção, Maringá, Book of Abstract, p. 57, 2006.
- Pires, C T G V M T; Oliveira, E C; Junior, C C; Pastore, H O; "A simple MCM-48 Synthesis", 7<sup>th</sup> Encontro Regional de Catalise, Lorena/Cachoeira Paulista, Book of Abstract, p 71, 2006.
- Pires, C T G V M T; Oliveira, E C; Pastore, H O; Microporous Carbon as Template for the Production of a New, 3<sup>rd</sup> Congresso Brasileiro de Carbono, Rio de Janeiro. Book of Abstract, p 44, 2005.
- Oliveira, E C; Pires, C T G V M T; Pastore, H O; "Pyrolysis Temperature effect on Carbon Nanostructure obtention", 3<sup>rd</sup> Congresso Brasileiro de Carbono, Rio de Janeiro. Book of Abstract, p 278, 2005.
- Pires, C T G V M T; Mendes, E G; Nunes, E R; Mendes, E G; Seimetz, R; Makiuchi M F R; Queiroga, F M; Mérida, J L; Parca, R M; Delgado, S M; "Paranoa Lake: Support Guide to Interdisciplinary Activities in High School Exact and Natural Sciences", 8<sup>th</sup> EPEB Encontro Perspectivas do Ensino de Biologia, São Paulo. Book of Abstract, p. 173, 2002.

### **Posters (Some examples)**

- Pires, C T G V M T; de Oliveira Junior, N G; de Brito, E A; Luengo, C A; Huber, J G; Airoidi, C, CO<sub>2</sub> sorption on carbon nanotubes grown with different catalysts and associated thermodynamics studies. Proceedings of the 29<sup>th</sup> International Conference on Diamond and Carbon Materials, Dubrovnik, Croatia, 2018.
- Vicente, R A; Fernández, P S; de Souza, M B C; Pires, C T G V M T, Glycerol electrooxidation in alkaline media on platinum surfaces modified by bismuth. Revista dos Trabalhos de Iniciação Científica da UNICAMP, 2018. doi 10.20396/revpibic2620181156
- Yukuhiro, V Y; Fernández, P S; de Souza, M B C; Vicente, R A; Pires, C T G V M T; Effect of Bi modification on Pt single crystals towards the glycerol electrooxidation in alkaline media. Revista dos Trabalhos de Iniciação Científica da UNICAMP, 2018. doi 10.20396/revpibic2620181345
- Saraiva, M D; Pires, C T G V M T; de Macedo, J C P; Óxido de bismuto como fotocatalisador do corante vermelho brilhante sob irradiação UV artificial, XXIV Congresso de Iniciação Científica da UFSCar, 2017.
- Souza, M B C; Guide, M M; Pires, C T G V M T; Fernandez, P S; The electrooxidation of glycerol on polycrystalline gold modified by Cu. Proceedings of 68<sup>th</sup> ISE, Providence, USA, 2017. doi 10.19146/pibic-2016-51725
- Okasaki, F B; Fernández, P S; Lima, C; Pires, C T G V M; Neto, E T; The electrooxidation of glycerol on Ag nanoparticles decorated with ultra-low Pt quantities. XXV Congresso de Iniciação Científica da Unicamp, 2017. doi 10.19146/pibic-2017-78569
- Guide, M M; Souza, M B C; Pires, C T G V M T; Fernandez, P S; Electrochemical study of glycerol oxidation on gold surfaces covered by metallic monolayers. In: XXIV Congresso de iniciação científica da Unicamp, 2016, Campinas, 2016.
- Preparation of Silica-Cellulose composite for controlled drug delivery, Pires, C T G V M T, Airoidi, C, 13<sup>rd</sup> Pacific Polymer Conference, Kaohsiung, Taiwan, 17-22/11/2013. Proceedings of PPC 2013, S3-77.
- Pires, C T G V M T, Airoidi, C.; Mesoporous TiO<sub>2</sub> Pillared Layered Materials, Characterization of Porous Materials 6 Workshop, Delrey Beach, 2012.
- Pires, C T G V M T, Airoidi, C.; Study on the syntheses of layered silicate magadiite containing structural Ti and/or Al, International Symposium on Creation and Control of Advanced Selective Catalysis as the celebration of the 50<sup>th</sup> anniversary of the Catalysis Society of Japan, Kyoto, 2008.

### **Presentations (excluding Complete Conferences works)**

- Pires, C T G V M T; de Oliveira Junior, N G; Melo Junior, M A; Airoidi, C, Exfoliated layered nickel amine functionalized phyllosilicates: synthesis and CO<sub>2</sub> sorption and calorimetry. European Advanced Materials Congress, Stockholm, Sweden, 23/08/2018 (Invited Speaker).
- Pires, C T G V M T, Santos, A L, Fattori, N, Airoidi, C; Gold nanoparticles supported in modified caulinite clay in situ one pot synthesis, 44<sup>th</sup> World Chemistry Congress, Istanbul, Turkey, 14/08/2013. (Oral Presentation) Book of Abstracts page 524.
- Pires, C T G V M T, Airoidi, C; Intercalation and exfoliation of sodium layered silicates, 44<sup>th</sup> World Chemistry Congress, Istanbul, Turkey, 12/08/2013. (Oral Presentation) Book of Abstracts page 288.
- Pires, C T G V M T, Airoidi, C; Exfoliated inorganic-organic hybrids layered materials: synthesis, characterization and metal sorption, II Workshop on adsorption and porous materials, Bogotá, Colombia, 31/05/2013. (Oral Presentation)
- Pires, C T G V M T, Airoidi, C; Exfoliated MWW based materials containing TiO<sub>2</sub>, II Simpósio de Nanomateriais do Centro-Oeste, Bonito, Brazil, 2013.
- Pires, C T G V M T; Marín, M L; Miranda, M A; Airoidi, C; Photocatalytic degradation of the pesticide methidathion by the layered silicate magadiite pillared with titanium oxide, Fourth International Symposium on Advanced micro- and mesoporous materials, Varna, Bulgaria, 07/09/2011.
- Pires, C T G V M T; da Costa, J R; Airoidi, C; Na-[Al]jilite layered aluminosilicate: syntheses, characterization, Cu<sup>2+</sup> sorption, thermochemical and spectroscopic investigation. International Symposium on Advances in Zeolite Science and Technology, Naples, Italy, 15/09/2011.
- Pires, C T G V M T; Molina, M A; Banus, E D; Candal, R J; Síntesis de los óxidos mixtos con Titanio, Tercera Escuela de Síntesis Materiales: Procesos Sol-Gel, Buenos Aires, Argentina, 05/10/2007.
- Pires, C T G V M T; Zeólitas: Processos de cristalização e aplicações (Lecture). 1<sup>a</sup> semana de geologia da Unicamp, Campinas, 18/10/2006.
- Pires, C T G V M T; Romero, A; Queiroga, F M; Makiuchi M F R; Mendes, E G; Nunes, E R; Mendes, E G; Seimetz, R.; Projeto Interdisciplinar de Ensino e Ciências. 21<sup>o</sup> Encontro Nacional dos Estudantes de Química, Curitiba, 01/02/2002

### **Short courses**

- Nanomateriais aplicados à prevenção e remediação ambiental, 8h, 27<sup>o</sup> Encontro Nacional dos Estudantes de Química, UECE, 10-12/03/2008
- Materiais Porosos: Síntese, Propriedades e Aplicações, 8h, 26<sup>o</sup> Encontro Nacional dos Estudantes de Química, UFAL, 12-15/02/2007
- Interdisciplinaridade nas Ciências da Natureza e Matemática, 12h, II Semana de Extensão da UnB, 13-16/08/2002
- Noções Básicas de Interdisciplinaridade, 4h, 10a SBPCj, 11/07/2002

### **Awards**

- Inventors award granted patent "Prêmio Inventores Unicamp 2017", Brazil, 2017.
- Literature award "Viagem Nestlé pela Literatura", Nestlé, Brazil, 1999.

### **Courses**

- Crystallography Beyond Diffraction, 34h 04-08 Set 2013, AIC/SIMP, Camerino, Italy.
- XAFS for beginners, 62h, out-2009, Max-Lab, Lund University, Sweden.
- Characterization of Porous Solids and Powders Surfaces, 30h, jul-2006, UNICAMP, Brazil.
- Chemometrics, 180 h, Prof. Dr. Márcia Miguel Castro Ferreira, fev-jul/2008, IQ-UNICAMP, Campinas.
- Single Particle Analysis, 46 h, Prof. Dr. José L. Carrascosa, Madrid, Spain.
- Tercera Escuela de Síntesis Materiales: Procesos Sol-Gel, 94 h, Prof. Dr. Sara Aldabe de Bilmes y colaboradores,

24/09 – 06/10/2007, Buenos Aires, Argentina.

1<sup>st</sup> School and Workshop on X-Ray Micro and Nanoprobes: Instruments, methodologies and applications, 40 h, Dr. Stefano Lagomarsino e Prof. Dr. Inna Bukreeva, 11-17/06/2007, Erice, Italy

Electron Microscopy: theory and practice SEM, HRTEM, and EELS, 400 h, Prof. Dr. Daniel Ugarte, LME-LNLS e IFGW-UNICAMP, ago/2005 – nov/2006, Campinas, Brazil.

1<sup>a</sup> Escola de Nanociencia e Nanotecnologia da UFRJ, 40 h, 31/07/2006-04/08/2006, UFRJ

Peneiras Moleculares: Propriedades, Caracterização e Aplicações, 42 h, 08/05/2006-12/05/2006, UFSCar.

Photophysic and Photochemistry, 180 h, Prof. Dr. Tereza Dib Zambon Atvars, fev-jul/2005, IQ-UNICAMP, Campinas

Applied molecular spectroscopy and electron microscopy: Solid state, surfaces and interfaces, 45 h, Prof. Dr. Leonardo Marchese, out/2004, UNICAMP.

5<sup>th</sup> Brazilian Seminar on Enzymatic Technology, 32 h, 07-10/04/2002, Brasilia-DF, Brazil.