Dr. Roberto Carlos SALVAREZZA

- Investigador Principal de la Carrera del Investigador Científico y Tecnológico del Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET).
- Director de los Laboratorios de Nanoscopías y Fisicoquímica de Superficies del Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas (INIFTA).

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Areas de Investigación:
Nanociencia y Nanotecnología. Microscopía de efecto túnel (STM) y de fuerzas atómicas (AFM). Ciencia de superficies.

Premios:

- *"Diploma al Mérito – Premios Konex 2003: Ciencia y Tecnología"* otorgado por la Fundación Konex premiando las trayectorias más relevantes 1993-2002, disciplina: Fisicoquímica, Química Inorgánica y Analítica.
  "Premios Konex de Platino 2003: Ciencia y Tecnología" otorgado por la Fundación Konex premiando la trayectoria más relevante del período 1993-2002, disciplina: Fisicoquímica, Química Inorgánica y Analítica.
  Premio Houssay 2007 otorgado por la SECyT en Ciencias Exactas y Naturales, categoría Investigador consolidado.
  Mención Premio Dupont 2007 al Proyecto"Desarrollo de Nuevos Métodos de Nano/microfabricación*"*
- *"Guggenheim Foundation Fellow"*, 2008.

Trabajos Publicados:
Autor/coautor de 261 trabajos científicos publicados en revistas científicas internacionales con referato. En los últimos 5 años: 50. Citas período 1988-2010: 4000 citas, índice Hirch: 33 (fuente ISI web of Science)

Reuniones Científicas:

- Asistencia / Participación en 84 Congresos, Encuentros, Jornadas y/o Simposios Nacionales e Internacionales.
- 30 Conferencias invitadas en Congresos Nacionales e Internacionales en el campo de la nanociencia y nanotecnología, electroquímica y la ciencia de las superficies.
- 230 Trabajos presentados a Congresos Nacionales e Internacionales.
- Chairman en 6 Congresos Internacionales.

Libros - Capítulos de libros:
Autor y Co-autor de 12 libros y capítulos de libros

Dirección de Becarios e Investigadores:
Dirección de 12 becarios y de tres Investigadores de CONICET, ANPCyT y CIC.

Dirección de Tesis Aprobadas:
Director de siete Tesis Doctorales aprobadas con máxima calificación. Dos de ellas en los dos últimos años. La Tesis *"Desarrollo de métodos de micro- y nanofabricación basados en eutoensamblados moleculares sobre superficies sólidas"* del Lic. Omar Azzaroni, de la Universidad Nacional de La Plata (2004) obtuvo *Honorable Mention of the IUPAC Prize for Young Chemists (2005).*

Actividad Docente:

Profesor Adjunto "ad honoren" Facultad de Ciencias Exactas UNLP 1981-1987, Materia Fisicoquímica

Profesor Titular ad honorem Facultad de Ingenieria UNLP, materia: Nanomateriales y Nanotecnología

Profesor contratado Universidad Autónoma de Madrid,1990-1991, Materia: Química General
Profesor de 4 escuelas Panamericanas PASI, Argentina-EEUU
Participación en el dictado de 15 cursos de postgrado

Participación en Organismos de Evaluación Científica:
- Evaluador del CONICET.
- Evaluador de la Fundación Antorchas.
- Evaluador de la ANPCyT.
- Miembro de Comisiones Asesoras CONICET, ANPCyT.
- Miembro del Comite Evaluador de la Brazilian Nanotechnology Networks (Ministry of Science and Technology, Brazil) 2003.
- Coordinador del área de Química de la ANPCyT
- Coordinador por la parte argentina del German-Argentina Workshop on Nanotechnology (2005), Buenos Aires
- Coordinador de la Red Argentina de Nanociencia y Nanotecnología Molecular, Supramolecular e Interfases (2005).
- Asesor del CONICET en el área de Nanociencia y Nanotecnología (2006)
- Miembro del Consejo Asesor de la Fundación Argentina de Nanotecnología (2006)
- Coordinador del Consejo Asesor del Centro Argentino-Brasileño de Nanotecnología (2006)

Actuación en Sociedades Científicas Nacionales Internacionales:
Presidente de la Asociación Argentina de Investigación Fisicoquímica (2002-2004)
- Secretario por la Argentina en la Internacional Society of Electrochemistry ((2002-2005)
- Jurado del Tajima Prize, Internacional Society of Electrochemistry (2005)
- Fellow del International Union of Pure and Applied Chemistry IUPAC (2006)
- Co-chair of the 4th Division · Electrochemical Material Science" International Society of Electrochemistry 2007.

Actuación en Revistas de Publicación Científica:
- Miembro del Editorial Board de la revista Electrochimica Acta, International Society of Electrochemistry (2002-2004).
- Editor Asociado del Journal of the Argentine Chemical Society.
- Revisor de las siguientes revistas científicas: Langmuir, Surface Science, Electrochimica Acta, Faraday Transactions, Journal of the Electrochemical Society, Journal of the Electroanalytical Chemistry, Nano Letters, Journal of Physical Chemistry B, Thin Solid Films, Journal of the American Chemical Society .

Conferencias internacionales invitadas más importantes (últimos 3años):
- "Electron transfer through molecular films: role of defects and molecular interactions", Nanoscience Workshop on Quantum Dots and Molecular Wires, Ruinas de Quilmes, Tucumán, Argentina, 15 al 21 de Mayo de 2003.
- "New Nano/microfabrication Methods Based on Self-assembled Monolayers, Pan American Advanced Studies Institute on Physics at the nanometer Scale", PASI 2003, San Carlos de Bariloche, Argentina, 8-18 de Junio de 2003.
- "Sulfur Adsoprtion on Au(111) Surfaces", 54th Meeting of the International Society of Electrochemistry, San Pedro, Brasil, 31 de Agosto al 5 de Septiembre de 2003.
- "New Routes for Nano/microfabrication Based on Surface Chemical Modification by Self-assembled Monolayers", 11th International Conference on Surface and Colloid Science, Iguassu Falls, 15 al 19 Septiembre de 2003.
- "Why is Nanotechnology Important for Developing Countries?", 3rd Session of the Work Commission on the Ethics of Scientific Knowledge and Technology, Río de Janeiro, Brasil, 1 al 4 de Diciembre de 2003.
- "Electrochemical deposition onto self-assembled monolayers: new insights into micro- and nanofabrication", Gordon Conference on Electrodeposition, New London, USA, 8 al 13 de Agosto de 2004.
- Building Complex Nanostructures by Using Molecular Films", 3rd Latin American Symposium on Scanning Probe Microscopy, Ouro Preto, Minas Gerais, Brasil, 14 al 17 de Abril de 2005.
- "Electrochemical soft lithography: a new route for nano/microfabrication", 207th Meeting of the Electrochemical Society, Quebec City, Canadá, 15 al 20 de Mayo de 2005.

- "The Effect of Thiol Adsorption on the Surface Roughness Evolution of Metallic Substrates"
- 48th ISE MeetingBanff, CanadaSeptember 9-14 2007

Publicaciones (últimos 10 años)
2001

194. Protective properties of dodecanethiols layers on copper surfaces: The effect of chloride anions in aqueous environments
O. Azzaroni, M. Cipollone, M.E. Vela y R.C. Salvarezza
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195. Anodisation of copper in thiourea- and formamidine disulphide-containing acid solution. Part I. Identification of products and reaction pathway.
A.E. Bolzán, A.S.M.A. Haseeb, P.L. Schilardi, R.C.V. Piatti, R.C. Salvarezza y A.J. Arvia
Journal of Electroanalytical Chemistry, **500**, 533-542 (2001).
196. Anodisation of copper in thiourea-containing acid solution. Part II. In situ transversal imaging observations. Kinetics of anodic film growth.
A.S.M.A. Hasseb, P.L. Schilardi, A.E. Bolzán, R.C.V. Piatti, R.C. Salvarezza y A.J. Arvia
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197. The behaviour of copper anodes in aqueous thiourea-containing sulphuric acid solutions. Open circuit potentials and electrochemical kinetics.
A.E. Bolzán, I.B. Wakenge, R.C.V. Piatti, R.C. Salvarezza y A.J. Arvia
Journal of Electroanalytical Chemistry, **501**, 241-252 (2001).
198. The kinetics of the √3x√3 R30° sulfur lattice stripping from Au(111): Competitive desorption-hole nucleation and growth model.
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199. Scanning tunnelling microscopy imaging of thiourea self-assembled adlayers on silver (111).
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200. Pattern transfer through thiol-assisted electrodeposition: A new route in nanofabrication of conducting materials.
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201. A novel application of alkanethiol self-assembled monolayers in nanofabrication: Direct molding and replication of patterned conducting masters.
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202. Preparation of 100-160-nm-sized branched palladium islands with enhanced electrocatalytic properties on HOPG.
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O. Azzaroni, P.L. Schilardi y R.C. Salvarezza
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C. Vericat, M.E. Vela, G. Andreasen, R.C. Salvarezza, L. Vázquez y J.A. Martín-Gago
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205. Electrodeposition kinetics and molecular interactions at negatively-charged self-assembled thiol monolayers in electrolyte solutions.
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C. Vericat, G. Andreasen, M.E. Vela, H. Martín y R.C. Salvarezza
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207. Modelling of silica film growth by chemical vapour deposition: Influence of the interface properties
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210. Electrochemical formation of palladium islands on HOPG: Kinetics, morphology and growth mechanisms.
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211. Stability analysis of branched silver electrodeposits: Solid phase growth under a marginally stable regime.
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217. Electrodesorption potentials of self-assembled alkanethiolate monolayers on Ag(111) and Au(111). An electrochemical, scanning tunneling microscopy and density functional theory study.
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225. Comparative molecular resolution STM imaging of thiourea, ethylthiourea and sulfur self-assembled adlayer structures on silver (111).
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O. Azzaroni, M. Fonticelli, P.L. Schilardi, G. Benítez, I. Caretti, J.M. Albella, R. Gago, L. Vázquez y R.C. Salvarezza
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O. Azzaroni, M. Fonticelli, G. Benítez, P.L. Schilardi, R. Gago, I. Caretti, L. Vázquez y R.C. Salvarezza
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233. Molecular Self-Assembly on Ultrathin Metallic surfaces : Alkanethiolate Monolayers on Ag(1x1)-Au(111).

M. Fonticelli, O. Azzaroni, G. Benítez, M.E. Martins, P. Carro y R.C. Salvarezza
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A. Hernández Creus, Y. Gimeno, P. Díaz, L. Vázquez, S. González, R.C. Salvarezza y A.J. Arvia
Journal Physical Chemistry B **108**, 10785-10795 (2004).

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239. Molding and Replication of Ceramic Surfaces with Nanoscale Resolution.
M.A. Auger, P.L. Schilardi, I. Caretti, O. Sánchez, G. Benítez, J.M. Albella, R. Gago, M. Fonticelli, L. Vazquez, R.C. Salvarezza y O. Azzaroni
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S. Bengió, M. Fonticelli, G. Benítez, A. Hernández Creus, P. Carro, H..Ascolani, G. Zampieri, B. Blum, R.C. Salvarezza
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