

**Galo Juan de Avila Arturo SOLER ILLIA**

Born in Buenos Aires, Argentina May 31<sup>st</sup>, 1970  
D.N.I. 21.645.576  
Married, three children  
Website; [www.unsam.edu.ar/ins](http://www.unsam.edu.ar/ins)  
orcid.org/0000-0001-9984-3806

Tel: +5411 2033-1400,  
ext. 6036  
cel +54911 5514 1294  
[gsoler-illia@unsam.edu.ar](mailto:gsoler-illia@unsam.edu.ar)  
[galo.soler.illia@gmail.com](mailto:galo.soler.illia@gmail.com)



- **Education**

- 1999-2002 **Post-doctoral researcher**, Université Paris VI, France (C. Sanchez group).
- 1993-1998 **Ph. D. Chemistry**, University of Buenos Aires (UBA), Advisor: M. A. Blesa.
- 1989-1993 **Lic. Ciencias Químicas**. School of Science, University of Buenos Aires (UBA).

- **Appointments**

2015- present: **Dean**, Instituto de Nanosistemas, Universidad Nacional de General San Martín  
2003-present: **Staff Researcher**, CONICET. **Principal Researcher** (since 2011)  
2004- present: **Professor** (Univ. Buenos Aires, FCEN), **Associate Professor** (since 2012)  
Grants by: ANPCyT, Antorchas, CONICET, MAE, CNRS-CONICET, ANPCyT, MinCyT, EU.

- **Currently funded projects**

**2018 Production of colloids for antimicrobial surface coatings.** *EMPRETECNO 2016-0014.*

**2017-2019. Design of Multifunctional Nanosystems with Applications in biomedicine through Combining Soft Matter and Surface Modification Tools.** ANPCyT PICT 2015-3526.

**2016-2019 Incorporation of Nanotechnology to Argentine Industry.** AR SET I 050

**2015-2019 How do Lectin-glycan Recognition Systems Integrate Immunoregulatory and Vascular Signaling Programs? From Tumor Biology to Glyco-nano-medicine.** PICT-2014-3687.

- **Interests and Collaborative Research Projects:**

**Current Interests:** Hybrid and nanocomposite mesoporous materials, Sol-gel synthesis of complex matter, self-assembly, thin films, synchrotron techniques, hierarchical materials, surface modification, metal nanoparticles, nano-optics. Dissemination of chemistry and nanotechnology.

**HR formation:** Current Assistant Researchers: 2, former Assistant Researchers: 3; completed postdocs: 14; current postdocs: 5; completed PhD Thesis: 10; ongoing PhD Thesis: 5; Completed MSc Thesis: 1; other student projects: 10; foreign students: 9.

**International collaborations:** C. Sanchez (Univ Paris VI), P. Innocenzi (Univ. Sassari), H. Míguez (Materials Res. Inst, Sevilla), S. Bilmes (UBA), L. Liz-Marzán (San Sebastián), R. Caruso (Melbourne), M. Müller and P. Vana (Göttingen), M. Takahashi (Osaka), I. Szleifer (Northwestern), M. Murugesu (Ottawa), L. D Carlos (Aveiro).

**Outreach Activities:** Three books about basics in chemistry and Nanotechnology (EUDEBA, 2007 and 2010, Paidós-Planeta, 2015), more than 80 spots on nanotechnology, open national TV (2006-2015), More than 75 conferences in science dissemination.

- **Summary of Scientific production:**

161 peer-reviewed papers (h=49 Google; h=43 Scopus corrected), more than 10000 citations, more than 25 papers with more than 100 citations); 172 presentations to meetings, 1 international and 4 national patents. More than 75 invited lectures in national and international meetings.

Industrial projects: hybrid materials (RheinChemie, 2009-2013; LANXESS, 2013-ongoing), surface modification (TECHINT, 2007-2010; PPG, 2010-2011, Laring 2012-2016), nanoparticle production (TECSAN, 2013, ongoing), Photoactive Thin Films (Y-TEC, 2016-ongoing).

Founder of Hybridon, a start-up dedicated to the synthesis of novel materials for health applications.

- **Awards and Honors**

**2019- Fellow**, International Sol Gel Society.

**2018- Franco-Argentine Innovation Award 2018 (SENIOR)**, SeCyT, French Embassy-Total.

**2018- Laurel de Plata to the Personality of the Year**, Rotary Club Buenos Aires.

**2018- Member**, Academia de Ciencias de América Latina.

**2016- Gran Premio Innovar 2016**, “Nanostructured Bactericidal Surfaces”.

**2016- Academician, Academia Nacional de Ciencias Exactas, Físicas y Naturales, Buenos Aires, Argentina**, Nanotechnology chair.

**2014- Invited Professor**, Osaka Prefecture University, Japan, November, 2014.

**2013- KONEX Diploma and KONEX Platinum Award 2013 for Science and Technology**, , Nanotechnology, KONEX Foundation.

**2013- Dr. María Cristina Giordano Award**, Argentine Association for Physical Chemistry Research.

**2012 - Elizabeth Jares-Erijman Award**, to scientific quality, Fundación Argentina de Nanotecnología.

**2012 - Wilsmore Fellow**, University of Melbourne.

**2011- Innovar 2011 (MINCyT)**, Applied Research 2nd Prize.

**2011-Nanotechnology Outreach Prize**, Argentina National Nanotechnology Foundation.

**2011- Ranwell Caputo Prize (Chemistry)**, Argentina National Academy of Sciences.

**2010- Young Scholar Award**, Pacificchem 2010.

**2009- Houssay Award, Distinción Investigador de la Nación Argentina**, MINCyT (Chemistry, Biochemistry).

**2007 – Invited Professor**, University Pierre et Marie Curie (Paris VI).

**2006 Venancio Deloufeu** award, Outstanding Young Researcher, Chemistry, National Academy of Sciences, Argentina.

**2006 Bernardo Houssay** prize, Outstanding Young Researcher in Exact and Natural Sciences, National Research Secretariat, Argentina.

- Member of AAIFQ, ACS, ISMS, ISGS
- Reviewer of several Journals (ACS, RSC, Wiley, Elsevier)
- International Advisory Board Member, Journal of Sol-Gel Science and Technology

Relevant Recent papers (last 5 years)

**Mesoporous Hybrid Thin Film Membranes with PMETAC@Silica Architectures: Controlling Ionic Gating Through the Tuning of Polyelectrolyte Density.**

A. Brunsen, S. Micoureau, M. Tagliacruzchi, I. Szleifer, O. Azzaroni, G. J. A. A. Soler-Illia  
*Chem. Mater.* **2015**, *27*, 808–821.

**Gated Supramolecular Chemistry in Hybrid Mesoporous Nanoarchitectures: Controlled Delivery and Molecular Transport in Response to Chemical, Physical and Biological Stimuli**

S. Alberti, G. J. A. A. Soler-Illia, O. Azzaroni,  
*Chem. Commun.* **2015**, *51*, 6050-6075.

**Tuning the Structure, Dimensionality and Luminescent Properties of Lanthanide Metal-Organic Frameworks under Ancillary Ligand Influence**

R. F. D'Vries, G. E. Gomez, J. H. Hodak, G. J. A. A. Soler-Illia, J. P. Ellena.  
*Dalton Transactions*, **2016**, *45*, 646-656.

**Single-nanometer sized low-valence metal hydroxide crystals: synthesis via epoxide-mediated alkalization and assembly toward functional mesoporous materials**

N. Tarutani, Y. Tokudome, M. Jobbagy, F. Viva, Federico; G. J. A. A. Soler-Illia, M. Takahashi  
*Chem. Mater.* **2016**, *28*, 5606–5610.

**Glyco - nano - oncology: Novel Therapeutic Opportunities by Combining Small and Sweet**

P. F. Hockl, A. Wolosiuk, J. M. Pérez Sáez, A. Bordoni, D. O. Croci, Y. Toum, G. J. A. A. Soler-Illia, G. A. Rabinovich  
*Pharmacological Research.* **2016**, *109*, 45–54.

**Designed Nanoparticle-Mesoporous Multilayer Nanocomposites as Tunable Plasmonic-Photonic Architectures for Electromagnetic Field Enhancement**

R. Martínez Gazoni, M. G. Bellino, M. C. Fuertes, G. Giménez, G. J. A. A. Soler-Illia, M. L. Martínez-Ricci  
*Journal of Materials Chemistry C*, **2017**, *5*, 3445 - 3455. Journal cover.

**Water Confined in Mesoporous TiO<sub>2</sub> Aerosols: Insights from NMR Experiments and Molecular Dynamics Simulations**

M. I. Velasco, M. Franzoni, E. Franceschini, E. Gonzalez Solveyra, D. Scherlis, R. D. Acosta, G. J. A. A. Soler-Illia  
*Journal of Physical Chemistry C*, **2017**, *12*, 7533–7541.

**Tethering Luminescent Thermometry and Plasmonics: Light Manipulation to Assess Real-Time Thermal Flow in Nanoarchitectures**

C. Brites, M. C. Fuertes, P. C. Angelomé, E. D. Martínez, P. Lima, G. J. A. A. Soler-Illia, L. D. Carlos  
*Nano Letters*, **2017**, *17*, 4746–4752.

**Novel electrochemical paper-based immunocapture assay for the quantitative determination of ethinylestradiol in water samples**

M. L. Scala-Benuzzi, J. Raba, G. J. A. A. Soler-Illia, R. J. Schneider, G. A. Messina  
*Analytical Chemistry*, **2018**, *90*, 4104-4111.

**Highly Ordered Mesoporous Oxide Thin Films through Self-Assembly of Size-Tailored Nanobuilding Blocks: a theoretical-experimental approach**

N. Tarutani, Y. Tokudome, M. Jobbágy, G. J. A. A. Soler-Illia, Q. Tang, M. Müller, M. Takahashi.  
*Chem. Mater.*, **2019**, *31*, 322-330.

## Reviews and Feature Articles

### **Designed Hybrid Organic-Inorganic Nanocomposites From Functional Nanobuilding Blocks**

C. Sanchez, G.J.A.A. Soler-Illia, F. Ribot, T. Lalot, C. R. Mayer, V. Cabuil.  
*Chemistry of Materials*, **2001**, 13, 3061-3083.

### **Chemical Strategies to Design Textured Silica and Metal Oxide-Based Organised Networks: From Nanostructured Networks to Hierarchical Structures**

G. J. A. A. Soler-Illia, C. Sanchez, B. Lebeau, J. Patarin.  
*Chemical Reviews*, **2002**, Vol 102 (11), 4093-4138 (1000+ citaciones).

### **Block Copolymer-Templated Mesoporous Materials**

G.J.A.A. Soler-Illia, E. L. Crepaldi, D. Grosso, C. Sanchez.  
*Current Opinion in Colloid and Interface Science*, **2003**, Vol 8, 109-126.

### **Fundamental of mesostructuration through evaporation induced self-assembly**

D. Grosso, F. Cagnol, G. J. A. A. Soler-Illia, E. L. Crepaldi, H. Amenitsch, A. Brunet-Bruneau, A. Bourgeois, C. Sanchez.  
*Advanced Functional Materials*, **2004**, Vol 14 (4), 309-322.

### **Mesoporous hybrid thin films: the physics and chemistry beneath**

G. J. A. A. Soler-Illia, P. Innocenzi.  
*Chemistry, a European Journal*, **2006**, 12, 4478-4494.

### **Multifunctional hybrids by combining ordered mesoporous materials and macromolecular building blocks**

G. J. A. A. Soler-Illia, O. Azzaroni.  
*Chemical Society Reviews*, **2011**, 40, 1107-1150.

### **Hierarchical mesoporous films: from self-assembly to porosity with different length scales**

P. Innocenzi, L. Malfatti, G. J. A. A. Soler-Illia  
*Chemistry of Materials*, **2011**, 23, 2501-2509.

### **Critical Aspects in the Production of Periodically Ordered Mesoporous Titania Thin Films**

G. J. A. A. Soler-Illia, P. C. Angelomé, M. C. Fuertes, D. Grosso, C. Boissière  
*Nanoscale*, **2012**, 4, 2549 - 2566.

### **Gated Supramolecular Chemistry in Hybrid Mesoporous Nanoarchitectures: Controlled Delivery and Molecular Transport in Response to Chemical, Physical and Biological Stimuli.**

S. Alberti, G. J. A. A. Soler-Illia, O. Azzaroni  
*Chem. Commun.* **2015**, 51, 6050-6075.

### **Wired Enzymes in mesoporous materials: A benchmark for fabricating biofuel cells**

P. N. Catalano, A. Wolosiuk, G. J. A. A. Soler-Illia, M. Bellino  
*Bioelectrochemistry*. **2015**, 106, 14-21.

### **Glyco - nano - oncology: Novel Therapeutic Opportunities by Combining Small and Sweet**

P. F Hockl, A. Wolosiuk, J. M. Pérez Sáez, A. Bordoni, D. O. Croci, Y. Toun, G. J. A. A. Soler-Illia, G. A. Rabinovich  
*Pharmacological Research*. **2016**, 109, 45-54.

