Candidate application for Early-Career Researcher (ECR) member of the ISGS Board of Directors 2026-2028

Title:	Dr.	
Name:	Esteban Gioria	
PhD degree date:	06.07.2022	
Current Affiliation (including address):	Institute of Chemical Technology. Leipzig University. Linnéstraße 3, 04103 Leipzig	
Five representative publications	1. **E. Gioria***, V. K. Ocampo-Restrepo, A. S. Bjørnlund, V. K. Pedersen, S. Helveg, I. Chorkendorff, C. D.Damsgaard*. In-situ Investigations of CH_4 Decomposition on Nickel Phyllosilicate: Switching from Tip to Base Growth of Carbon Nanotubes. *Small* **2025**, 21 (31) 2500994. DOI: 10.1002/smll.202500994	
	2. **E. Gioria***, R. N. d'Alnoncourt, A. Thomas, F. Rosowski. Size, Shape and Composition Control of Metallic Colloidal Nanoparticles for the Design of Heterogeneous Catalysts. *ChemCatChem.* **2025**, DOI 10.1002/cctc.202401701	
	3. F. Ebert, P. Ingale, S. Vogl, S. Praetz, C. Schlesiger, N. Pfister, R. N. d'Alnoncourt, B. Roldán Cuenya, A. Thomas, **E. Gioria***, F. Rosowski. Cobalt(II) Nanoclusters Incorporated in Ordered Mesoporous Al_2O_3 for Stable and Coke-Resistant Propane Dehydrogenation. *ACS Catal*. **2024**, 14, 9993-10008. DOI:10.1021/acscatal.4c02067	
	4. **E. Gioria**, L. Duarte, N. Bashiri, W. Hetaba, R. Schomäcker , A. Thomas*. Rational design of tandem catalysts using a core–shell structure approach. *Nanoscale Adv.* **2021**, 3, 3454-3459. DOI: 10.1039/D1NA00310K	
	5. **E. Gioria***, V. K. Ocampo-Restrepo, A. S. Bjørnlund, V. K. Pedersen, S. Helveg, I. Chorkendorff, C. D.Damsgaard*. Colloidal Fe Nanocrystals for CH_4 Decomposition: Role of the Support. *J. Mater. Chem. A* **2025**, 13, 27136-27151. DOI:10.1039/D5TA03667D	

Statement of motivation for becoming an ECR member of the ISGS Board (500 words max):	I see this as an opportunity to actively contribute to the development of an inclusive, collaborative, and internationally connected community while representing the perspectives and needs of researchers at the early stages of their careers. I am currently a junior group leader at the Faculty of Chemistry, Leipzig University, where my research focuses on the synthesis of inorganic materials for heterogeneous catalysis and sustainable chemical processes. Throughout my academic career, I have worked in different countries and research environments, including Argentina, Germany, and Denmark. These experiences have given me a broad understanding of the opportunities and challenges faced by ECRs, ranging from scientific collaboration and mobility to funding, mentoring, career development, and establishing research independence. Beyond my research activities, I have always enjoyed contributing to the scientific community through service and outreach. I have been actively involved in organizing scientific events, mentoring students, and creating interdisciplinary collaborations. Most recently, I have contributed to the organization of scientific meetings aimed at promoting interactions between young researchers and established scientists, creating opportunities for networking, knowledge exchange, and professional development. As an ECR representative on the ISGS Board, I would work to ensure that the voices of early career researchers are heard and reflected in the Society's activities. I also believe that ECRs can play an important role in strengthening communication between established and emerging researchers. My own career has benefited enormously from international collaborations, competitive fellowships, and mentorship, and I appreciate how transformative these opportunities can be. I would therefore be committed to supporting activities that help other early career researchers access similar opportunities, regardless of their geographical location or career stage. I believe that my international research experience, enthusiasm for community building, and commitment to supporting the next generation of scientists would allow me to make a meaningful contribution to the ISGS Board. Serving as an ECR member would be both an opportunity to give back to the scientific community and to help shape an environment where early career researchers can collaborate, and contribute to advancing sol-gel science.

Please attach a copy of **your current CV (maximum three pages),** including relevant information on your education and professional background, current position, career history and affiliations, areas of expertise and interest, memberships of professional or learned societies, honours, awards, and any other information relevant to your application.

Curriculum Vitae

Personal Data

Title	Dr. Ing-
First name	Esteban
Last name	Gioria
Current position	Junior Group Leader
Current institution	Institute of Chemical Technology. Leipzig University. Germany
Identifiers/ORCID	0000-0001-6918-5734

Qualifications and Career

Stages	Periods and Details
Degree programme	Chemical Engineering (Diplom), 01.04.2010 / 06.02.2017. Universidad Nacional del Litoral (Argentina) GPA 8.5/10
Doctoral degree (finished in Berlin)	01.12.2019 / 06.07.2022: Doktor der Ingenieurwissenschaften (Dr.-Ing). Technische Universität Berlin, Germany. *Thesis: "Colloidal nanoparticles for the rational design of (multi)metallic heterogeneous catalysts"* Prof. Dr. Arne Thomas. Grade: distinguished with honours or "*summa cum laude"*
Doctoral degree (not finished in Argentina)	01.04.2017 / 30.11.2019: PhD student in Chemical Engineering, Universidad Nacional del Litoral (Argentina). Afterwards, I decided to start the PhD in Germany (supplementary career information, vide infra)
Stages of academic/professional career	Since 01.05.2025: Junior Group Leader. Institute of Chemical Technology, Prof. Dr. Roger Gläser, Leipzig University. 01.02.2023 / 31.03.2025: Postdoctoral researcher. Technical University of Denmark (DTU). Group of Prof. Dr. Ib Chorkendorff. Kgs. Lyngby, Denmark. 01.08.2022 / 31.12.2023: Postdoctoral researcher. Technische Universität Berlin. BasCat BASF UniCat Jointlab, Dr. Frank Rosowski. Germany.

Activities in the Research System

- October 2026: Selected by the Sino-German Center for Research Promotion (jointly operated by the DFG and NSFC) as an Early Career Researcher to participate in a delegation visit to outstanding research institutions in China in autumn 2026.
- Since January 2026: Assistant Editor. Journal of Sol-Gel Science and Technology (Springer Nature). Official journal of the International Sol-Gel Society (ISGS).
- 2026: Organization Committee and Chair of the panel discussion of the workshop "Bridging Academia and Industry: translating sol-gel research to the real world". 23rd International Sol-Gel Conference. Lisbon, Portugal.
- March 2026: Chair of Poster Workshop "Catalysts Preparation" at the 59. Jahrestreffen Deutscher Katalytiker, organized by YounGeCatS and DECHEMA. Weimar, Germany.

- December 2025: Reviewer for the DOE Office of Science Graduate Student Research (SCGSR) Program. United States Department of Energy.
- September 2025. Organization Committee of The Central German Catalysis Teaching Network (MDKL). Leipzig University.
- June 2026 to date: Member of the International Sol-Gel Society (ISGS).
- April 2025 to date: Member of the Young German Catalysis Society (YounGeCatS), DECHEMA.
- February 2025 to date: Member of the Young European Catalysis Network (YEuCat) working group “communication”.
- June 2025 to date: Member of the Early Career Researcher (ERC) network from the International Sol-Gel Society (ISGS). Coordinator of workgroup “Industry Collaboration”.
- Peer Review Activity: +55 reviews for RSC, ACS, Wiley and Elsevier including Angewandte Chemie, ACS Catalysis, ACS Applied Nano Materials, ChemSusChem, ChemCatChem, Applied Catalysis B, ChemistrySelect, RSC New Journal of Chemistry, Dalton Transactions, Journal of Catalysis.

Teaching

- Since May 2025: Lecturer in Chemical Reaction Engineering. Institute of Chemical Technology, Faculty of Chemistry. Leipzig University. Prof. Dr. Roger Gläser.
- June 2023 to December 2024: Lecture “Introduction to Thermal Catalysis” and Practical Course “X-Ray diffraction in films and powders”. Denmark Technical University (DTU). Prof. Ib Chorkendorff and Prof. Jakob Kibsgaard.
- April 2017 to January 2019: Head of laboratory assignments, General and Inorganic Chemistry. Permanent position assigned by contest. Universidad Nacional del Litoral. Prof. Sebastian Collins.
- May 2015 to February 2017: Teacher Assistant, General and Inorganic Chemistry. Temporary position assigned by contest. Universidad Nacional del Litoral. Prof. Sebastian Collins.

Mentoring

- August 2026 – January 2027: Supervisor of postdoctoral researcher Dr. Carlos Imbachi-Gamba (DAAD Grow Scholarship) for a 6-months research stay.
  Proyect: “*Multimetallic Nickel-based phyllosilicates as highly active and stable catalysts for the reverse Water Gas Shift Reaction”.*
- (Co)-supervision of students:
  Total 16. MT: Master thesis; BT: Bachelor thesis; P: Practical course.
  L. Leimbach (MT), F. Felsberg (MT) (2026, Leipzig University), X. Wei (P), H. Kirchner (BT) (2025, Leipzig University), J. Tapia (MT), M. Rosenstrøm (P and BT), Johan Nielsen (P and BT), V. Pedersen (MT) (2024, Technical University of Denmark), V. Pedersen (P), C. Møller (P) , J. Doerk (MT) (2023, Technical University of Denmark), L. Grunewald (P), P. Wegener (P), (2022, Technical University of Berlin), G. Lee (BT), M. Lee (P), (2022, Technical University of Berlin), C. Signorini (P) (2019, Universidad Nacional del Litoral), F. Wisniewski (P) (2018, Universidad Nacional del Litoral).

Scientific Results

Articles in peer-reviewed journals: 25 articles. 11 as first author and 4 as corresponding author. Citations: 509, H index: 12, h-10 index: 14.

Academic Distinctions

- March 2025. Weimar (Germany). Max-Buchner-Forschungsstiftung Travel Grant for participating and giving a lecture at the 58th Jahrestreffen Deutscher Katalytiker.

- April 2024. Xiamen (China). Best Oral Presentation Award at the 13th Natural Gas Conversion Symposium. Sponsored by the Royal Society of Chemistry.
- April 2024. Copenhagen (Denmark). Otto Mønsteds Foundation Travel Grant for participating at the 13th Natural Gas Conversion Symposium in Xiamen, China.
- August 2023. Copenhagen (Denmark). Otto Mønsteds Foundation Travel Grant for participating at the SUNCAT Summer Institute 2023 at Stanford University, USA.
- May 2020. Venice (Italy). IUPAC International Union of Pure and Applied Chemistry Grant for participating at the Green Chemistry Postgraduate Summer School. 40 participants from all over the world. Afterwards, held online due to pandemic.
- Februar 2019. Berlin (Germany). Deutsch-Argentinisches Hochschulzentrum (DAHZ) - DAAD (Deutscher Akademischer Austauschdienst). 10 months scholarship for a research stay at the group of Prof. Dr. Arne Thomas (Technical University of Berlin).
- September 2018. Buenos Aires (Argentina). Grant for participating at the 8th Latin American Sol-Gel School supported by the International Sol-Gel Society and sponsored by CELFI (Latin American Center for Interdisciplinary Training).
- June 2018. Budapest (Hungary). National Council of Science of Hungary. Travel grant for a one-month research stay at the Institute of Materials and Environmental Chemistry.
- February 2018. Bariloche (Argentina). CNEA National Council of Atomic Energy. Grant for participating at the Instituto Balseiro Summer School 2018. (15 students selected among 300 applicants from Latin America).
- April 2017. Buenos Aires (Argentina). Five-year PhD fellowship at the Institute of Research on Catalysis and Petrochemistry (INCAPE, UNL), awarded through a national competitive call by the National Scientific and Technical Research Council (CONICET).

Other Information

Conferences and Invited Talks (Oral Presentations): Total 13; 4 listed below

- 23rd Sol-Gel International Conference, 31 August – 4 September, 2026, Lisbon (Portugal). *CuZn Metal Phyllosilicates for the CO_2 conversion to added value products.*
- Invited Talk - Institute of Research in Catalysis and Petrochemistry (INCAPE). December 2024, Santa Fe (Argentina). *Colloidal Nanoparticles and Sol-Gel Techniques for the Rational Design of Heterogeneous Catalysts.*
- 13th Natural Gas Conversion Symposium (NGCS), 21-24 April, 2024, Xiamen (China). *In-situ investigations of Ni phyllosilicates for CH_4 decomposition.*
- 27th North American Catalysis Society Meeting (NAM27), 22-27 May, 2022, New York (USA). *Engineered bimetallic CuNi nanoalloys as model sites for the electrocatalytic OER Reaction*

Research Grants

September 2026: Co-Principal Investigator of the project "CO_2-CNT," funded by the Independent Research Fund Denmark (DFF). Total funding: DKK 7.196.799 (EUR 959.573).
Co-PI at Leipzig University, in collaboration with Prof. C. Damsgaard (PI, SurfCat and DTU Nanolab, Technical University of Denmark). The project will fund two postdoctoral researchers and one doctoral candidate. As Co-PI, I am supervising the students and postdocs, leading the development of novel synthetic approaches for catalysts design and operando studies for CO_2 and CH_4 conversion.

November 2026: Add-on Fellow for Interdisciplinary Science and Transfer, Joachim Herz Foundation. 15.000 EUR funded for my research project "Data-Driven Discovery of New Materials for Carbon Capture and Utilization".