



## Personal information

Last name: Allegretto

Name: Juan Alejandro

E-mail: allegretto@inifta.unlp.edu.ar

Phone: +54 0221 4257291 (ext. 192)

Workplace: *Soft Matter Laboratory*

<https://softmatter.quimica.unlp.edu.ar>

Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas

Departamento de Química, Facultad de Ciencias Exactas, Universidad Nacional de La Plata



## Education

- *PhD:*

Ph.D. in Science and Technology, Chemistry mention.

**2016-on going**

*“Synthesis and characterization of electroactive surfaces modified with thin films of Metal Organic Frameworks<sup>1</sup>”*

Universidad Nacional de San Martín, Buenos Aires., Argentina.

Supervisors: Dr. O. Azzaroni and Dr. M. Rafti.

- *University degree:*

Chemist; Physical chemistry specialization. (Folio 163, reg. 253)

**2011-2016**

GPA 8,64; Historic GPA: 7,93

Facultad de Ciencias Exactas, Universidad Nacional de La Plata.

## Courses:

- *“Introduction to computational modelling methods in materials science.”*

Facultad de Ciencias Exactas, UNLP.

Date: **November 25<sup>th</sup>, 2019 to November 29<sup>th</sup>, 2019**

Workload: 40 hs.

- *“Rietveld method applied to powder X-Ray diffraction”*

Centro de Tecnología de Recursos Minerales y Cerámica, UNLP.

Date: **July 1<sup>st</sup>, 2019 to July 5<sup>th</sup> 2019**

Workload: 40 hs.

<sup>1</sup> Translation from original title: *“Síntesis y caracterización de superficies electroactivas modificadas con films delgados de Polímeros Microporosos de Coordinación”*



- *“Crystallography and X-Ray diffraction”*  
Instituto de Tecnología Sábado, UNSAM.  
Date: **April 8<sup>th</sup>, 2019 to April 25<sup>th</sup>, 2019** Workload: 72 hs.
- *“Toxicology I: Toxicokinetic. Toxicity mechanisms.”*  
Instituto de Investigación e Ingeniería Ambiental, UNSAM.  
Date: **March 18<sup>th</sup>, 2019 to April 29<sup>th</sup>, 2019** Workload: 88hs.
- *“Introduction to Solid-State physics”*  
Instituto de Tecnología Sábado, UNSAM.  
Date: **March 22<sup>th</sup>, 2019– April 5<sup>th</sup>, 2019** Workload: 60 hs.
- *“Sao Pablo School of Advanced Science on Colloids”.*  
Instituto de Química, Universidad de Sao Pablo, Brasil.  
Date: **October 28<sup>th</sup>, 2018 – November 7<sup>th</sup>, 2018** Workload: 64 hs.
- *“X-ray Photoelectron Spectroscopy (XPS) applied to new materials and catalysis”*  
Facultad de Ciencias Físico Matemáticas y Naturales. Universidad Nacional de San Luis  
Date: **November 6<sup>th</sup> to November 10<sup>th</sup>, 2017** Workload: 40 hs.
- *“8<sup>th</sup> school of material synthesis: Sol gel processes”*  
Departamento de Química Inorgánica, Analítica y Química Física, UBA.  
Date: **September 18<sup>th</sup> to September 30<sup>th</sup>, 2017** Workload: 90 hs.
- *“Fundamentals and applications of tunnelling (STM) and atomic forces microscopy (AFM)”*  
Departamento de Química, Facultad de Ciencias Exactas, UNLP.  
Date: **August 8<sup>th</sup> to August 10<sup>th</sup>, 2017** Workload: 15 hs.
- *“X-ray absorption: theoretical basis, XANES spectra simulation and applications to systems of general interest”.*  
Departamento de Física, Facultad de Ciencias Exactas, UNLP.  
Date: **June 16<sup>th</sup> to July 14<sup>th</sup>, 2017** Workload: 15 hs.
- *“Synthesis, characterization and application of microporous materials”.*  
Facultad de Ciencias Físico Matemáticas y Naturales. Universidad Nacional de San Luis  
Date: **June 27<sup>th</sup> to July 1<sup>st</sup>, 2016** Workload: 20 hs.



### **Research stays abroad:**

- **Centro de Investigación Cooperativa en Biomateriales CIC BiomaGune**  
San Sebastian, Spain.  
Supervisor: Dr. Sergio E. Moya  
Date: **March 1, 2018 – August 24<sup>th</sup>, 2018** *full-time dedication for 6 months*
- **Austrian Institute of Technology**  
Vienna, Austria.  
Supervisor: Prof. Dr. Wolfgang Knoll  
Date: **October 1, 2016 to March 24, 2017** *full-time dedication for 6 months*

### **Work experience:**

- **Graduated Teaching assistant** **August 1, 2019 - on going**  
Physical Chemistry  
Departamento de Química, Facultad de Ciencias Exactas, Universidad Nacional de La Plata.
- **Graduated Teaching assistant** **October 1, 2017 to February 28, 2018**  
Physical Chemistry  
Departamento de Química, Facultad de Ciencias Exactas, Universidad Nacional de La Plata.
- **Undergraduate Teaching assistant** **September 1, 2016 to October 1, 2017**  
Physical Chemistry  
Departamento de Química, Facultad de Ciencias Exactas, Universidad Nacional de La Plata.
- **Undergraduate Teaching assistant** **September 1, 2015 to August 31, 2016**  
Physics  
Departamento de Física, Facultad de Ciencias Exactas, Universidad Nacional de La Plata.
- **Tutor of professional practices of Secondary Students.** **March 2014 to December 2014**  
Escuela de Educación Técnica N° 1, Brandsen, Bs. As.
- **Chemistry professor** **April 15, 2014 to July 18, 2014**  
Plan FinEs 2. R6321/95, D.G.C.y E.
- **Environmental Policy Department** **March to December 2013**  
Municipalidad de Brandsen, Bs. As



## Grants

- *PhD scholarship grant -CONICET 2016* **April 2016 - on going**
- *Scholarship Stimulus to Scientific Vocations 2015.* **September 2015 to March 2016**

## Workshops and Seminars:

- *“Virtual International Simposium of Nano- Microgels”* **April 24<sup>th</sup>, 2020**  
Oral session: “Synthesis and characterization of thermoresponsive ZIF-8@PNIPAm-co-MAA microgel composites with enhanced performance as an adsorption/release platform.” **Juan A. Allegretto**, Juan M. Giussi, Sergio E. Moya, Omar Azzaroni, and Matias Rafti.
- *VIII Workshop on novel methods for electronic structure calculations. Introduction to computational modelling methods in materials science.* **Nov-2019**  
La Plata, Buenos Aires, Argentina. Attendant.
- *“6<sup>th</sup> Meeting on Self Assembly Structures In Solution and at Interfaces”* **Nov-2018**  
AutoOrg 2018, Sao Pedro, Brasil. Attendant and Poster presentation.
- *“International Workshop on Self-Assembly and Hierarchical Materials in Biomedicine: Drug Delivery, Tissue Engineering, Sensing and Safety Issues.”* **October 8<sup>th</sup> to 10<sup>th</sup>, 2018**  
Centro de Investigación Cooperativa en Biomateriales CIC BiomaGUNE, San Sebastián, Spain.  
Attendant and Poster presentation.
- *“8<sup>th</sup> Workshop: Applications of Advanced Sol-Gel and Hybrid Materials”* **23/09/2017**  
Attendant and Poster presentation.
- *“AIT PhD Seminar school”, Hirschegg, Austria.* **January 22 to 28, 2017**
  - *Workshop: “Career Planning – How to shape your future”,* Matthias Merkelbach, Impulsplus.
  - *Workshop: “Good Scientific Practice”,* Nicole Föger, Austrian Agency for Research Integrity.
- *HYMADE Progress Meeting* **October 10 to 14, 2017**  
*Austrian Institute of Technology, Vienna, Austria.*
  - *Lecture “Processing of Nanocomposites”,* Prof. Dr. Wolfgang Knoll.
  - *Workshop “Functional Thin Films”*



## Publications:

### Publications

- (4) "Synthesis and characterization of thermoresponsive ZIF-8@PNIPAm-co-MAA microgel composites with enhanced performance as an adsorption/release platform." **Juan A. Allegretto**, Juan M. Giussi, Sergio E. Moya, Omar Azzaroni, and Matias Rafti. *RSC Advances*, 2020, 10, 2453-2461. (Themed collection "2020 HOT RSC Advances")
- (3) "Shedding Light on the Dark Corners of MOF Thin Films: Growth and Structural Stability of ZIF-8 Layers Probed by Optical Waveguide Spectroscopy." **Juan A. Allegretto**, Jakub Dostalek, Matías Rafti, Bernhard Menges, Omar Azzaroni, and Wolfgang Knoll. *J. Phys. Chem. A* 2019, 123, 1100–1109 (cover page).
- (2) "Polyelectrolyte capping as straightforward approach toward manipulation of diffusive transport in MOF films". **Juan A. Allegretto**, Jimena S. Tuninetti, Agustín Lorenzo, Marcelo Ceolín, Omar Azzaroni, and Matías Rafti. *Langmuir*, 2018, 34 (1), pp 425–431.
- (1) "Metal-organic frameworks meet polymer brushes: enhanced crystalline film growth induced by macromolecular primers". M. Rafti, **Juan A. Allegretto**, G. Segovia, J.S. Tuninetti, E. Bindini, J.M. Giussi, O. Azzaroni. *Mater. Chem. Front.*, 2017,1, 2256-2260. (**Inside-cover**. Themed collection "Materials Chemistry Frontiers **HOT articles** for 2017"))

### Posters

- (4) "6<sup>th</sup> Meeting on Self Assembly Structures In Solution and at Interfaces"  
Poster: "Towards MOF-Microgel hybrid materials: Responsive microgels as colloidal platforms for ZIF-8 integration". **Juan A. Allegretto**, Juan M. Giussi, Matías Rafti, Sergio E. Moya, Omar Azzaroni.
- (3) "Sao Pablo School of Advanced Science on Colloids"  
Poster: "Vinylimidazole as a doping agent for cross-linked top-bottom ZIF-8 film assembly". **Juan A. Allegretto**, Matías Rafti, Omar Azzaroni.
- (2) "International Workshop on Self-Assembly and Hierarchical Materials in Biomedicine: Drug Delivery, Tissue Engineering, Sensing and Safety Issues."  
Poster: "Poly(vinylimidazole) brushes as Anchoring strategy to build hybrids ZIF-8/Polymeric films." **Juan A. Allegretto**, Agustín Iborra, Juan M. Giussi, Matías Rafti, Sergio E. Moya, Omar Azzaroni.



(1) "8th workshop: Applications of advanced Sol-Gel and hybrid materials."

"Síntesis y caracterización de superficies electroactivas modificadas con films delgados de polímeros microporosos de coordinación". **Juan A. Allegretto**, Matías Rafti, Omar Azzaroni.

### **Human Resources**

- Victor A. Nosthas Aguiar **Dic-2019 - currently**  
Experimental assistant for degree thesis.  
Facultad de Ciencias Exactas, UNLP.

### **Management and Organization Activities**

- *Member of the Advisory committee*  
Selection for three Professors position, expedients N° 700-003171/14-0, N° 700-004133/15-00, and N° 700-008619/06-03 – Universidad Nacional de La Plata.
- *Organizing committee: "VI conference of Science and Technology"* **June to September 2016**  
Facultad de Ciencias Exactas, Universidad Nacional de La Plata.
- *Commission of Academic Degrees* **June to September 2016**  
Facultad de Ciencias Exactas, UNLP.
- *Departmental council of Chemistry* **April 2014 to June 2016**  
Facultad de Ciencias Exactas, UNLP.

### **Participations:**

- *"XII Jornadas de Estudiantes de Posgrado"* **September 26 to 28, 2018**  
Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas (INIFTA) CONICET-UNLP
- *"XII Jornadas de Estudiantes de Posgrado"* **August 28 to 30, 2017**  
Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas (INIFTA) CONICET-UNLP
- *"Actividades para la enseñanza y el aprendizaje de la química."* **2014 - 2017**  
*Un vínculo de integración entre el nivel medio y el universitario".*  
Facultad de Ciencias Exactas, UNLP.



- *“La Facultad va a la Escuela. Formalizando vínculos entre las Escuelas Primarias y la Universidad.”*

**2015-2016**

Facultad de Ciencias Exactas, UNLP.

### ***Skills:***

- *Good level of English.*
- *Great predisposition to group and interdisciplinary work.*
- *Use of Blender and Photoshop and Illustrator.*
- *Use of LaTeX, Office suite and calculation programs (Origin).*