

**VERA ALEJANDRA ALVAREZ**  
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**DATE OF BIRTH:** 02/02/1976

**NATIONALITY:** Argentina

#### **CURRENT APPOINTMENTS.**

- **President at FAN** (Argentine Nanotechnology Foundation). Since June 2012.
- **Principal Researcher of CONICET (National Research Council, Argentina) appointed with INTEMA (Institute for Research in Materials Science and Technology)**
- **Vice-Director INTEMA.** Since March 2019
- **Associate Professor (National University of Mar del Plata - UNMdP)**
- **Head of the Composite Materials Group** of INTEMA (the group is composed by 29 members, including researchers, technicians and graduate students).
- **Category I.** Incentive Program of the SPU. Categorization date: 11/2018.

ORCID: <https://orcid.org/0000-0002-4909-4592>

**Index h (Scopus):** 42    **Total citations:** 7409    **Number of authors who cited these works:** 6172  
<https://www.scopus.com/authid/detail.uri?authorId=8650161100>

**Index h (Google Scholar):** 51    **Index h-10 (Google Scholar):** 162    **Total number of citations:** 10333  
<https://scholar.google.com/citations?user=HC3dCk4AAAAJ>

**Research gate:** [https://www.researchgate.net/profile/Vera\\_Alvarez](https://www.researchgate.net/profile/Vera_Alvarez)

#### **Websites**

<http://intema.gob.ar/>

<https://www.youtube.com/watch?v=SpWz0LDxYhA&t=14s>

#### **FIELDS OF INTEREST**

New materials from biodegradable polymers and natural reinforcements. Materials for Agro. Hydrogels for Biomedical applications. Nanotechnology. Nanomateriales. Nanocomposites. Functional Textiles.

#### **AWARDS AND RECOGNITIONS**

**2022** Award to outstanding women for their work and social commitment in the city, granted by Rotary Club Satélite Nova Mar del Plata.

**2021** Feminine Trajectory Award granted by the Honorable Deliberative Council and the Women's Directorate of the Municipality of General Pueyrredón.

**2020** L'oreal-CONICET Award "For Women in Science" awarded jointly by L'oreal and CONICET

**2019** Innova-T Award 25 years. UNIBIO: Platform for the development of bioagro-inputs. 3rd prize. Awarded by the Innova-T Foundation.

**2018** Award for Technological Innovation awarded by the National Academy of Exact, Physical and Natural Sciences.

**2018** Mention L'oreal-CONICET Award "For Women in Science" awarded jointly by L'oreal and CONICET

**2017** Feminine Trajectory Award granted by the Honorable Deliberative Council and the Women's Directorate of the Municipality of General Pueyrredón.

**2016** Bernardo Houssay Award Engineering, Architecture and Information Technology Area granted by the MINCyT.

**2015** Stimulus Award to Young Scientists in Process Engineering awarded by the Bunge & Born Foundation.

**2014** Ing. Antonio Marín Award, granted by the National Academy of Engineering.

**2013** Nanotechnology Dissemination Prize awarded by the Argentine Nanotechnology Foundation.

**2012** Humberto Ciancaglini Award, granted by the Engineering Academy of the Province of Buenos Aires

**2010** Prize Alvaro Alonso Barba in Materials Engineering. Awarded by the National Academy of Exact, Physical and Natural Sciences of Argentina in recognition to outstanding contributions of young scientists in the field of Materials Science.

## RESEARCH STAYS IN FOREIGN UNIVERSITIES

*University of Perugia, Terni, Italy. Supervisor: Dr. José María Kenny.*

*University of Basque Country, Spain. Supervisor. Iñaki Mondragón Egaña.*

*University of Pisa, Italia. Supervisor: Dr. Mariano Pracella.*

**PUBLICATIONS IN INTERNATIONAL REFEREED JOURNALS:** 212 publications

**BOOK CHAPTERS:** 55 chapters

**Invited Talks:** 35 talks.

**INTERNATIONAL CONFERENCE PAPERS:** 205 presentations

**BINATIONAL/NATIONAL CONFERENCES:** 254 presentations

**RESEARCH PROJECT MANAGEMENT:** 52 projects

**DEVELOPMENT OF TECHNOLOGY – CONTRACTS:** 66 developments for industry

**DIRECTION OF STUDENTS AND RESEARCHERS:** 12 researchers – 8 finished Doctoral Theses – 15 PosDoctoral Students – 45 Ungraduate Students.

**ORGANIZATION OF INTERNATIONAL EVENTS:** 18 national and international events

## MOST RELEVANT PROJECTS

**2012-2016 OLI-PHA.** A novel and efficient method for the production of polyhydroxyalkanoate polymer-based packaging from olive oil waste water. Project financed under the seventh framework program of the European Economic Community for technological development. Unit 4. NMP - Nanosciences, Nanotechnologies, Materials and New Production Technologies. Coordinator for America. Total amount of the project: \$ 21,840,000. Objective: To develop a biodegradable polymer from the washing waters of olive oil and produce different types of containers and packaging. This project involves 3 research groups and 10 companies (1 from America and 9 from Europe). <https://cordis.europa.eu/result/rcn/176356/es>

**2011-2016.** FSNano 004. Development of modified nanoclay and innovative products from domestic clays. National Agency for Promotion of Science and Technology (ANPCyT) - Sector Funds (FONARSEC). Grant Funding: \$13.960.769.- (approximately 3.4 million USD). (Director) . The project aims to generate value chains that are sustained in the commercialization of products formulated from high value-added materials based on matrices polymeric, by adding nanoclays modified. The use of modified polymers with nanoclays enables product development innovative, since, if good compatibility and dispersion of the components is achieved, can greatly improve properties mechanical, barrier, resistance to fire or abrasion, among other materials original. <https://radi.org.ar/wp-content/uploads/2016/10/06-2.pdf>

### *Technical advice on Pre-seed Projects of the Argentine Nanotechnology Foundation (FAN)*

- Recyclable snowboards. Entrepreneur: Eng. Matias Lanfranconi. <http://www.fan.org.ar/proyectos-presemilla/tablas-de-snowboard-reciclables/>
- Algatex. Development of a new dermoprotective textile with marine algae. Entrepreneur: Dis. Ind. María Alejandra Martínez. <http://www.fan.org.ar/proyectos-presemilla/algatex-desarrollo-de-un-nuevo-textil-dermoprotector-con-algas-marinas/>
- Design and Construction of Pilot Equipment for Wastewater Treatment with Magnetic Nanoclays. Entrepreneur: Dr. Sebastián Bonanni. <http://www.fan.org.ar/proyectos-presemilla/disenio-y-construccion-de-equipo-piloto-para-el-tratamiento-de-aguas-residuales-con-nanoarcillas-magneticas/>

## TEACHING

**All listed appointments belong to the Faculty of Engineering of the National University of Mar del Plata.**

**2009-2020** Teacher. Graduate Courses: Biodegradable polymers and biocomposites; Composite Materials Technology; Processing of Reactive Polymers and Composites. PhD program on Materials Science. Un-graduated courses: Processing of Composite Materials; Materials for Industrial Applications.

**2001-2007** Teaching Assistant. Advanced Materials and Processing of Composite Materials and Chemistry.

**1999-2001** Teaching Assistant. Processing of Materials, Organic Chemistry.

**1997-1999** Ungraduate Teaching Assistant, Macromolecules, General Chemistry.

## FINISHED DIRECTED DOCTORAL THESIS (Doctorate in Materials Science)

**2015-2019** Development of bio-inputs for its application in modern agriculture. Chem. Danila Merino. CONICET Doctoral Fellow (Director). Defense date: March 8, 2019.

**2013-2018** Obtaining and characterizing starch-based nanocomposites at Pilot Plant scale. Eng. María Paula Guarás. CONICET Doctoral Fellow (Co-Director). Defense date: March 12, 2018.

**2012-2017** Controlled release of oncological drugs. Chem. Merari Chevallier. ANPCyT and UNMdP Doctoral Fellow (Director). Defense date: November 17, 2017.

**2010-2015** Microencapsulation strategies of reactive monomers. Chem. Romina Ollier. Doctoral Fellow: CONICET (Director). Defense date: March 20, 2015.

**2009-2013** Polyvinyl Alcohol Based Compound Hydrogels for Biomedical Applications: BioEng. Jimena González. FONCYT –CONICET Doctoral Fellow (Director). Defense date: October 11, 2013.

**2007-2013** Study of the water diffusion process and its effect on the final properties of composite materials. Eng. Guillermo Ghione. PhD (Director). Defense date: June 26, 2013.

**2006-2010** Biodegradable matrix biocomposites with nanoreinforcements. Eng. Leandro Ludueña. CONICET Doctoral Fellow (Director). Defense date: December 7, 2010.

### **ACTUAL MANAGED PROJECTS**

- 2020-2021 Development of gels, films and polymeric coatings for the elaboration of protective materials against COVID-19. Project of the National Agency for Scientific and Technological Promotion (ANPCyT). The general objective of the project is to synthesize low-cost, polymer-based materials that are simple to prepare and implement and that are efficient as tools for the prevention of infections and elimination of the COVID 19 virus from different surfaces. The preparation of hybrid polymeric-inorganic materials with antiviral-disinfecting properties is proposed and it is planned to implement them as a strategy to avoid / minimize the spread of the virus.
- 2020-2021 Project 15 / G563. Grant from the National University of Mar del Plata. Director: Vera Alvarez.. Topic: Development of nanomaterials for water remediation. In this project we propose the development of nanomaterials composed of polymeric matrix with natural clays and synthetic magnetic nanoparticles as additives. New systems will be designed from these materials. Filters that allow the removal of various contaminants from aqueous media, heavy metals such as arsenic and Cadmium, derived from the use of agrochemicals such as Nitrates and Phosphates, emerging as antibiotics.
- 2019-2020 Project 15 / G539 (ING543 / 19). Grant from the National University of Mar del Plata. Director: Vera Alvarez. Topic: Development of polymeric gels for applications in water decontamination, hydric and nutritional reservoirs in agricultural soils and functional textiles. The main objectives of this project are to design, obtain and characterize innovative hydrogels using eco-compatible procedures, suitable for different applications: decontamination of water, water and nutritional reservoirs in agricultural soils, and functional textiles. The materials prepared in each of the cases will be subsequently tested under service conditions.
- 2018-2020 PICT-2017-0603. Project of the National Agency for Scientific and Technological Promotion (ANPCyT). Director: Vera Alvarez. Topic: Development of systems that carry active ingredients for applications in biomedicine, agro-inputs and the textile industry. Amount: \$ 1,008,000. The project proposes the development of new vectorized formulations, especially suitable for applications in Biomedicine, Agro-inputs and Textile Industry. Knowledge will be generated in the area of nano-biomaterials to be used as devices that release active ingredients, the synthesis, characterization, development and evaluation of new materials capable of releasing these active ingredients in an efficient and effective way to solve the specific problems that we are facing. have raised. Another fundamental objective of this project is the training of human resources in micro and nanotechnology with an interdisciplinary vision and ability to transfer to the environment.
- 2018-2020 PICT-2017-0359. Project of the National Agency for Scientific and Technological Promotion (ANPCyT). Responsible of material's development and characterization. Topic: Development of intelligent controlled release systems for molecules obtained by 3D printing. Amount: \$ 1008000.
- 2017-2020 PICT STARTUP 506/16. Agricultural Development Platform: micro-nanoparticles of chitosan and salicylic acid as a prototype model. Financed by ANPCyT. Amount: \$ 720000. UNIBIO is Technological platform for the development of sustainable agro-inputs, a project that seeks to generate value-added products from what is usually considered biological waste.

### **EVALUATION INVOLVEMENTS**

- Evaluation of Projects, scholarships, researchers and technicians from CONICET, ANPCyT, UNMdP, UNR, UNLP, UBA, UNER, UNC, CONEAU, Cariplo Foundation., Bunge & Born Foundation.
- Reviewer of 44 international indexed journals and several book and books chapter form Elsevier and Springer.
- PhD Thesis Jury (15), Teaching Competitions (12), Master's Thesis (20).