Mirta Inés ARANGUREN

Personal data
Birth date: 18-01-1958
Married, three children

Workplace:
Instituto de Investigaciones en Ciencia y Tecnología de Materiales
(INTEMA, UNMdP-CONICET) y
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Verified reviewer's activities: https://www.webofscience.com/wos/author/record/1715980

EDUCATION

1985-1990 **University of Minnesota**, Minneapolis, Minnesota; USA.
Ph.D. in Chemical Engineering.

1975-1980 **Universidad Nacional de Mar del Plata (UNMdP)**, Mar del Plata, Argentina
B.Sc. in Chemical Engineering.

Research Interests: Green polymer composites and nano-composites. Natural fibre-polymer composites. Biopolyurethanes. Polymers and nanoparticles/fibres based on renewable bio-resources. Nanocellulose. Applied Rheology.

Present Position and Appointments
* *Senior Researcher* of the *National Council of Scientific and Technical Research (CONICET)*, Argentina (retiree, countinuing under contract ad-honorem). Scientific researcher since 1992.
* *Professor* of the *Universidad Nacional de Mar del Plata,* Facultad de Ingeniería, Chemical Engineering Department (retiree, continuing as Professor Emeritus)

Awards

* Designated as **Professor Emeritus** of the Universidad Nacional de Mar del Plata, Nov. 2022.
* **Life Achievement award** from the National Academy of Exact, Physical and Natural Sciences of Argentina (13 Dec. 2018)
* Silver medal to the **Outstanding Women** of the Buenos Aires Province award given by the Honorable Senate of Buenos Aires (March 26, 2014).
* **Iberoamerican Award to the Innovation and Enterpreneurship**, (group award) in 2010, for the work Starch-starch nanocomposites for packaging.
* Recipient of a John Simon Memorial **Guggenheim Fellowship** in 2008, for her scientific achievements and to carry on the work of Nanocellulose Reinforced Smart Polyurethanes.
She is the only woman recipient of a Guggenheim fellowship (Latin America and the Caribbean) in the field of Chemistry.
https://www.gf.org/all-fellows/?_field_of_study=chemistry%2Cchemistry&_competition=latin-america-caribbean%2Clatin-america-caribbean

* The international **IFS/King Baudouin Award** (1996) for scientific quality of the IFS (International Foundation for Sciences, Sweden) supported research project "Use of Wood Processing By-Products as Reinforcement of Composite Materials",
* Recipient of four **international research grants**: from **TWAS** (Third World Academy of Sciences, Italy) in 1993 and 1998, and from **IFS** (International Foundation for Sciences, Sweden) research grants in 1992 and 1997.

Member of Scientific Societies

1992- Member of The Third World Organization for Women in Science (OWSD).
1987- 2008 Member de la Rubber Division de la American Chemical Society (ACS).
2009- 2011 Member of the Society of Plastic Engineers (SPE).
2011-cont. Member of the American NanoSociety, ANS.
2014-cont. Member of the Sociedad Argentina de Materiales, SAM

Teaching Positions

Professor Emeritus since November 2022 of the Universidad Nacional de Mar del Plata (UNMdP). In charge of the Applied Rheology course for the Materials Science Graduate Program of the School of Engineering and an Introductory course of applied rheology applied to food engineering for the undergaduate program of the Chemical and Food Engineering Department.

2010-2020 Full Professor of the Chemical and Food Engineering Department (UNMdP).
1994-2010 Associate Professor of the Chemical and Food Engineering Department (UNMdP).
1990-1994 Adjoint Professor of the Chemical and Food Engineering Department and of the Materials Engineering Department (UNMdP).
1988-1990 Teaching Assistant at the Department of Chemical Engineering and Materials Science University of Minnesota, USA.
1978-1985 Teaching assitant at the Chemical Engineering Department (UNMdP).

Researcher/teacher: Category 1 since 1998, Program of the Ministerio de Cultura y Educación.

Research Positions

Senior researcher (Investigador Superior), retiree under contract (ad honorem) of the Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET) since Nov. 2020. Continue activities as researcher, evaluator and advisor.

2013-2020 Senior researcher (Investigador Superior), (CONICET)
2005-2013 Senior researcher (Investigador Principal), (CONICET)
1999-2005 Senior researcher (Investigador Independiente), (CONICET)
1992-1999 Junior researcher (Investigador Adjunto) , (CONICET)
1988-1990 Research Assistant at the Dept. of Chemical Engineering and Materials Science University of Minnesota, USA.
1980-1985 Internal and external research fellowships from CONICET

Thesis Supervision, Supervision of Researchers and Students

Direction of Doctorate (Ph.D.) and Magister Scientiae thesis (UNMdP)

1. Marcovich, Norma. Ph.D.Thesis title: Vegetable Composite Polymeric Materials. 1992-1996. Present position: Full Professor, UNMdP, Senior researcher (Inv. Principal) CONICET.
2. Stefani, Pablo. Thesis title: Epoxy-Polyuretane-Urea Copolymers. 1995- 1999.

Present position: Associate Professor, UNMdP), Researcher (Independiente) CONICET
3. Auad, M. Luján (co-dir.). Ph.D.Thesis title: Synthesis and properties of divinyl-ester resins. 1995-1999. Present position: Full Professor at the Dept. Chemical Engineering, Director of Center of Polymer and Advanced Composites and Associate dean for graduate studies and faculty development for the Samuel Ginn College of Engineering, Auburn University, USA.
4. Zárate, Claudia (co-dir.). Thesis title: Natural fiber reinforced phenolic composites Magister Scientiae Materials Science. 1999-2002. Present position Associate Professor, UNMdP.
5. Nuñez, Adrián José. Ph.D.Thesis title: Analysis of critical properties of lignocellulosic composites. Fellowship from CONICET for joint thesis work with Prof. Lars Berglund, Royal Institute, of Technology, Lightweight Structures, Stockholm, Sweden (2000-2005). Present position: Senior Researcher and Coating Laboratory Manager at Tenaris.
6. Mosiewicki, Mirna (co-dir.). Ph.D.Thesis title: Vegetable Based composite materials: Matrix and reinforcement (2000-2005). Present position Adjoint Professor, UNMdP, Senior researcher (Inv. Principal) CONICET.
7. Schroeder, Walter (co-dir.). Ph.D. Thesis title: Modification of vinyl-ester resins with thermoplastic polymers: Phase separation, morphologies and final properties. (2002-2006). Award to the best thesis work from the Asociación Química Argentina (2007). Present position Adjoint professor UNMdP and Senior researcher (Inv. Independiente) CONICET.
10 Pereda, Mariana. Ph.D. Thesis title: Natural polymers and derived composites applied in food packaging. (2005-2010). Present position Research associate at the French National Institute for Agriculture, Food, and Environment (INRAE), France.
12 Meiorin, Cintia. Ph.D. Thesis title: Smart polymers based on tung oil. (2009-2013). Present position Junior researcher (Inv. Adjunto) CONICET.
13 Hormaiztegui, María Eugenia Victoria. Ph.D. Thesis title: Films and coatings from bio-waterborne polyurethanes reinforced with cellulose. (2013-2018). Present position Profesional de Apoyo de CIC PciaBsASen CITEMA, La Plata, Argentina.

Direction of Doctorate (Ph.D.) and Magister Scientiae thesis in other Universities
14. Krause Sammartino, Lydia Estela (co-dir.). Ph.D. Thesis title: Composite materials made from polypropylene and vegetable fibers: Palma caranday and formio. (2002-2007). Doctor in Science and Technology, area Materials, Universidad Nacional de San Martín. Present position Head of projects in Laboratorios Rivero, BsAs, Argentina.
15 Wik, Vera María (co-dir.). Master Thesis title: Castor oil-based polyurethane materials. Preparation and characterization. Master student from the Royal Technologic University, KTH, Sweden. (2008-2009).
16 García, Nancy (co-dir.). Ph.D. Thesis title: Nanocomposite materials based on starch to be used in food packaging. (2006-2011). Doctor in Science and Technology, area Chemistry, Universidad Nacional de San Martín. Present position Junior researcher (Inv. Adjunto) CONICET.

She also supervised the work of Young Researchers, technical and professional staff and several undergraduate students in the Materials Science Graduate School.

Member of of examination commitees in Thesis defenses

Member of examination commitees in Doctoral and Master Thesis
in Argentina: 10 Ph.D. and 3MSc at University of Mar del Plata, and 18 PhD and 3 MSc in othe universities of Argentina (UNS, UNC, UNL, UNSL, UBA, UNLP)

and abroad:
1 PhD thesis for the Escuela Universitaria de Ingeniería Técnica Industrial, Departamento de Ingeniería Química y del Medio Ambiente, San Sebastián, Spain;
1 PhD thesis for the Norwegian University of Science and Technology, Trondheim, Norway
1 PhD thesis for the Luleå University of Technology, Wood Products Engineering, Skellefteå, Sweden.

Management activities (research and teaching)

2009-2017	Head of the Group ECOMATERIALS, INTEMA (at that time formed by 13 researchers and several students)
2015- 2019	Member of the Directive board of INTEMA
2004-2005	Vicedirector of the Chemical Engineering Department (UNMdP)
1998-2000	Vicedirector del Instituto of INTEMA
1996-1998	Vicedirector of the Chemical Engineering Department (UNMdP)
1994-1996	Member of the Consultive board of the School of Engineering (UNMdP)
1994-1996	Member of the Consultive board of the Chemical Engineering Department (UNMdP) also in 1998-2000, 2002-2004, 2004-2006 and 2006-2008.
1991-1993	Member of the Consultive board of the Materials Engineering Department (UNMdP)

Member of Committees

Member of consultive committees in CONICET: Processes, products and biotechnology (2005-6, 2010-11)

Member of consultive committees ad-hoc FONCYT: Chemical technology 2008, 2011, 2013, 2015.

Expert consultant in Workshop to define fields for calling of project applications, MINCyT, 2012.

Member of consultive committees in CONICET: Fellowships in Materials Engineering and Technology (2014-16)

Member of ad-hoc committee in CONICET: Promotion of Senior researchers (to Inv. Superior, 2014, 2015, 2019, 2020).

Member of consultive national committee in Biomaterials (COBIOMAT) from the Secretary of Agriculture, Livestock and Fisheries of the Ministry of Economy, Argentina.

Member of committee of Ethic in CONICET 2023-.

Editorial Work

Editorial Board Member for *Journal of Renewable Materials* (JRM), (co-editor for South America 2014-2018), for *Journal of Adhesion Science and Technology*, *Polymers*, and for *Journal of Natural Fibers*. She was also editorial board member for *Natural Resources* (2010-2014), *Revista de la Sociedad Argentina de Materiales* (SAM) in 2012 and 2013 and *Polymers (mdpi Journals)* (2020 -2022).
She was Guest editor of special issues for the *Journal of Renewable Materials* (in 2016 and 2018) and for *Polymers* in 2021.

Since 1993 she has acted as reviewer of articles for more of 100 international journals, among them: *Journal of Natural Fibers* (94 opportunities), *Journal of Applied Polymer Science* (89), *Carbohydrate Polymers* (87), *Journal of Adhesion Science and Technology* (66), *International Journal of Biological Macromolecules* (46), *Biomacromolecules* (37), *Composites Part A* (37), *Polymer Engineering and Science* (28), *Industrial Crops and Products* (26), *Progress in Organic Coatings* (24), *Cellulose* (23) and several others.

She has also been reviewer of international projects (for Latin America, CYTED-Ibero American and European-EULANEST, COST, Narodowe Centrum Nauki, Poland; 'NKFI Fund', Hungary; MIUR, Italy; and the Dutch Research Council (NWO)).

Technology transfer and consulting activities

2000-2001 I+D project for Huntsman Polyurethanes (Belgium-USA). Researcher in charge of a two year project.

2006 Consultant: Production of a report of the state of the art (national and international) for the Secretary of Science and Technology in the field of composite materials (prospective, necessities, capacities, recommendations).

2011. Patent INPI Expediente: 201001000444, (8/01/2010). Inventores: S. Goyanes, M. Aranguren, N. García, L. Famá, L. Ribba, A. Dufresne
Internacional extension of the patent:
Serial number: PCT/IB2011/050066 (Extensión PCT) N° PCT/IB2011/050066 (2011-01-06).
United States Patent number: 20130034638 Application number: 13/520953
Institución solicitante: CONICET, INIS BIOTECH LLC.
Title: A biodegradable, biocompatible and non-toxic material, sheets consisting of said material and the use thereof in food, pharmaceutical, cosmetic and cleaning products.
Inventores: S. Goyanes, M. Aranguren, N. García, L. Famá, L. Ribba, A. Dufresne

2022. I+D agreement between LYRTRON S.A., (one year), consultant member of the group of I+D.

PUBLICATIONS

Author of 21 Book chapters, 122 articles in international reviewed indexed journals and 265 abstract/proceedings from scientific meetings.
At May 24, 2023, she had a h_{index} of 45 (Google Scholar) and 42 (Scopus)

*Works are listed from **2010***

Book chapters

1. M. Aranguren, N. Marcovich, M. Mosiewicki, Chapter 5, "Vegetable Oil - Based Polymers and Lignocellulosic Derived Composites", in: "Green Composites: Properties, Design and Life Cycle Assesment", Editor: François Willems and Pieter Moens, Nova Science Publishers, Inc., pp.99-118 (Total pages#: 218) Publication date: 2010, ISBN: 978-1-60741-301-1.
2. M. Mosiewicki, N. Marcovich, M. Aranguren, Chapter 4 in Part I: "Characterization of fibre surface treatments in natural fibre composites by Infrared and Raman spectroscopies" in "Interface engineering in natural fibre composites for maximum performance - Part 1. Processing and surface treatments to compose the interface in natural fibre composites", Editor: Dr Nikolaos E Zafeiropoulos, Editorial: Woodhead Publishing, pp. 117-145 (Total pages#: 416) Publication date: February 2011. ISBN 1 84569 742 1 ISBN-13: 978 1 84569 742 6
3. Walter F. Schroeder, Julio Borrajo, Mirta I. Aranguren, "Phase separation of PMMA modified vinyl-ester thermosets: morphology, thermodynamics and mechanical properties", Chapter 4 in: "Thermoplastic and Thermosetting Polymers and Composites", Editors: Linda D. Tsai and Matthew R. Hwang, Nova Science Publishers, Inc. , pp. 123-146 (Total pages#: 223) Publication date: 2nd quarter 2011, ISBN: 978-1-61209-264-5
4. Mirta I. Aranguren, Mirna A. Mosiewicki and Norma E. Marcovich, Chapter 21: "Spectroscopic characterization of renewable nanoparticles and their nanocomposites", in "Biopolymer Nanocomposites: Processing, Properties, and Applications", *Polymer Engineering and Technology Series*. Edited by Alain Dufresne, Laly A. Pothan and Sabu Thomas, Domasius Nwabunma (Series Editor), Richard F. Grossman (Series Editor), Editorial John Wiley & Sons, Inc. pp. 509-540 (Total pages#: 680). Publication date: 15 July 2013. ISBN-13: 978-1-1182-1835-8
5. N. E. Marcovich, M.L. Auad, M.I. Aranguren "Responsive Nanocellulose Composites" Chapter 13 in Vol. 2 "Biobased nanocomposites: Processing, Characterisation and Properties", Co-Editor: Alexander Bismarck, for the "Handbook of Green Materials; Processing Technologies, Properties and Applications" (4 volumes), K. Oksman Editor. Editorial World Scientific. pp.181-199 (Total pages#: 1124). Publication date: June 14, 2014. ISBN-13: ISBN: 978-981-4566-45-2 (Hardcover) ISBN: 978-981-4566-47-6 (ebook)
6. María Marta Reboredo and Mirta Inés Aranguren, Actualization of the entry "Polymer Composites" for *Encyclopedia of Surface and Colloid Science*, Editor Ponisseril Somasundaran.CRC Press, Third Edition, Set de 10 volumes (August 6, 2015) - 8480 Pages ISBN: 9781466590458.
7. Mirta I. Aranguren, Norma E. Marcovich, Mirna A. Mosiewicki, "Mechanical Performance of PU based bio-composites" Chapter 17 in *Biocomposites: Design and Mechanical Performance,* Editors: Manjusri Misra, Jitendra Kumar Pandey and Amar Kumar Mohanty, Editorial: Woodhead Publishing Ltd. Pages 465-485, (Total

pages#: 501), ISBN 978-178242394-2; 978-178242373-7, DOI: 10.1016/B978-1-78242-373-7.00010-X (26 Aug. 2015) .
8. Norma E. Marcovich, María M. Reboredo, Mirta I. Aranguren, Chapter 22 "Natural Fiber Thermoplastic Composites" in the Second Edition, *Handbook of Thermoplastics*, Editors: Olagoke Olabisi, Kolapo Adewale, Taylor & Francis- CRC Press Plastics Engineering Series #41. Pages 727-751, Total pages: 994, ISBN: 9781466577220 (3 February, 2016).
9. Mirta I. Aranguren, Norma E. Marcovich, María M. Reboredo, "Fibers, Vegetable", *Encyclopedia of Polymer Science and Technology* (Herman F. Mark. Executive ed.: Arza Seidel. Development ed.: Mihai Peterca) – 15Volume Set, 4th Edition, (27 pages, 1-26), Total: 12344 pages, Mihai Peterca Eds, 4th edition, Editorial: John Wiley & Sons, Inc. Published online: 15 August 2016, ISBN: 978-1-118-63389-2, DOI: 10.1002/0471440264.pst380.pub2
10. Mirta I. Aranguren, Verónica Mucci, María Soledad Peresin, Chapter 17 "Spectroscopy Studies of Cellulose Nanofibers and Nanocrystals Based Nanocomposites", in "Handbook of Nanocellulose and Cellulose Nanocomposites", 2 Vol. Pages: 581-608. Total pages#: 920. Editors: Hanieh Kargarzadeh, Ishak Ahmad, Sabu Thomas, Alain Dufresne, Publisher: John Wiley & Sons, Incorporated; Imprint: Wiley-VCH Verlag GmbH &Co. KGaA.Weinheim, Germany. Published: June-2017. ISBN: 978-3-527-33866-5
11. Verónica L Mucci, Mirta I Aranguren, Javier I Amalvy, María EV Hormaiztegui, Chapter 15 "Recent Developments in Waterborne Polyurethanes for Coating Applications" in "Eco-Friendly Waterborne Polyurethanes: Synthesis, Properties, and Applications". Pages 253-266. Publisher: CRC Press; Published: January 25, 2022.

Articles (Listed from 2010)

1. S.J. Eichhorn, A. Dufresne, M. Aranguren, N.E. Marcovich, J.R. Capadona, S.J. Rowan, C. Weder, W. Thielemans, M. Roman, S. Renneckar, W. Gindl, S. Veigel, J. Keckes, H. Yano, K. Abe, M. Nogi A.N. Nakagaito, A. Mangalam, J. Simonsen, A.S. Benight, A. Bismarck, L.A. Berglund, T. Peijs, "Review: Current International Research into Cellulose Nanofibres and Nanocomposites". *Journal of Materials Science*, on-line:DOI: 10.1007/s10853-009-3874-0, print: **45 (1)**, 1-33, (2010).
2. Maria L. Auad, Mirna A. Mosiewicki, Tara Richardson, Mirta I. Aranguren, Norma E. Marcovich, "Nanocomposites made from cellulose nanocrystals and tailored segmented polyurethane". *Journal of Applied Polymer Science*, **Volume 115, Issue 2,** 1215-1225 (2010)
3. L. E. Krause Sammartino, M. I. Aranguren, M.M. Reboredo, "Chemical and Mechanical Characterization of Two South-American Plant Fibers for Polymer Reinforcement: Caranday Palm and Phormium". *Journal of Applied Polymer Science,* **115 (4)**, 2236-2245, (2010).
4. Walter F. Schroeder, Mirta I. Aranguren, Julio Borrajo, "Reactivity Ratios and Copolymer Composition Evolution During Styrene(St)/Bis Phenol-A Dimethacrylate(BDMA) Free-Radical Crosslinking Copolymerization", *Journal of Applied Polymer Science,* **115 (5)**, 3081-3091 (2010).
5. Mariana Pereda, Mirta I. Aranguren, and Norma E. Marcovich "Effect of Crosslinking on the Properties of Sodium Caseinate Films", *Journal of Applied Polymer Science,* **116 (1)**, 18-26, (2010).
6. Mariana Pereda, Mirta I. Aranguren, and Norma E. Marcovich "Caseinate films modified with tung oil". *Food Hydrocolloids,* **24 (8)**, 800-808 (2010).
7. Nancy L. García, Laura Ribba, Alain Dufresne, Mirta Aranguren, Silvia Goyanes, "Effect of glycerol on the morphology of nanocomposites made from thermoplastic starch and starch nanocrystals", *Carbohydrate Polymers,* **84 (1)**, 203-210 (2011)
8. Tara Richardson, Mirna A. Mosiewicki, Norma Marcovich, Mirta I. Aranguren, Fatma Kilinc-Balci, Roy M. Broughton, Jr., Maria L. Auad, "Study of Nano-reinforced Shape Memory Polymers Processed by Casting and Extrusion", *Polymer Composites,* **32(3)**, 455-463 (2011).
9. M. L. Auad, T. Richardson, W.J. Orts, E.S.Medeiros, L.H.C. Mattoso, M.A. Mosiewicki, N. E. Marcovich, M.I. Aranguren, "Polyaniline Modified Cellulose Nanofibrils as Reinforcement of a Smart Polyurethane", Online: Dec.24, 2010, *Polymer Internat*ional, **60 (5)**, 743–750 (May 2011).
10. M. A. Mosiewicki, N. E. Marcovich, M. I. Aranguren "Creep behavior of wood flour composites made from linseed oil-based polyester thermosets". *Journal of Applied Polymer Science*, **121(5),** 2626-2633
11. Vera M. Wik, M. I Aranguren, M. A. Mosiewicki "Castor oil-based Polyurethanes containing cellulose nanocrystals", *Polymer Engineering & Science*. **51(7),** 1389-1396 (2011)
12. M. I. Aranguren, J. F. González, M. A. Mosiewicki, "Biodegradation of a vegetable oil based polyurethane and wood flour composites", *Polymer Testing*, **31(1),** 7-15 (Feb. 2012). *Apareció entre los "Most Downloaded Polymer Testing Articles. The most downloaded articles from SciVerse ScienceDirect in the last 90 days."(22-03-2012)*

13. María L. Auad, Tara Richardson, Marisa Hicks, Mirna A. Mosiewicki, Mirta I. Aranguren, Norma E. Marcovich, "Shape memory segmented polyurethanes: Dependence of behavior on nanocellulose addition and testing conditions", *Polymer International*, **61**, 321–327 (2012)
14. C. Meiorin, M. I. Aranguren, M. A. Mosiewicki, "Smart and structural thermosets from cationic copolymerization of a vegetable oil". *J Appl.Polym.Sci*. **124 (6)**, 5071-5078 (2012).
15. M. A. Mosiewicki, U. Casado, N. E. Marcovich, M. I. Aranguren "Moisture dependence of the properties of composites made from tung oil based polyurethane and wood flour", *Journal of Polymer Research*, **19 (2)**, 9776-9783 (2012).
16. Cintia Meiorin, Mirta I. Aranguren and Mirna A. Mosiewicki, "Vegetable oil/styrene thermoset copolymers with shape memory behavior and damping capacity". *Polymer International*, **61 (5)**, 735–742 (2012).
17. U.M. Casado, R.U. Quintanilla, M.I. Aranguren and N.E. Marcovich, "Composite films based on shape memory polyurethanes and nanostructured polyaniline or cellulose-polyaniline particles". *Synthetic Metals*, **162(17)**, 1654– 1664, (2012)
18. N.L. García, M. Lamanna, N. D'Accorso, A. Dufresne, M. Aranguren, S. Goyanes. "Biodegradable materials from grafting of modified PLA onto starch nanocrystals". *Polymer Degradation and Stability*, **97(10)**, 2021-2026, (2012)
19. M.I. Aranguren, N. E. Marcovich, Walter Salgueiro, Alberto Somoza, "Effect of the nano-cellulose content on the properties of reinforced polyurethanes. A study using mechanical tests and positron anihilation spectroscopy", *Polymer Testing,* ISSN: 0142-9418, **32 (1)**, 115–122, (2013)
20. Cintia Meiorin, Mirna A. Mosiewicki and Mirta I. Aranguren, "Ageing of thermosets based on tung oil/styrene/divinylbenzene", *Polymer Testing,* **32**, pp. 249-255, (2013)
21. Mosiewicki, M.A., Aranguren, M.I., "A short review on novel biocomposites based on plant oil precursors", contribución invitada por editor Prof. Bela Pukanszky, *European Polymer Journal*, **49**, 1243-1256 (2013). In the list of the most Downloaded European Polymer Journal Articles in the "last 90 days", acceso a la página: Enero 30, 2018.
22. Walter F. Schroeder, Mirta I. Aranguren, Guillermo E. Eliçabe, Julio Borrajo, "Free-Radical Polymerization Induced Microphase Separation in Poly(methyl methacrylate)/Dimethacrylate Blends: Experiment and Modelling", *European Polymer Journal*. **49(12)** 3956-3965 (2013).
23. Pereda, M, Dufresne A., Aranguren, M.I., Marcovich, N., "Polyelectrolyte Films Based on Chitosan/Olive Oil and Reinforced with Cellulose Nanocrystals", *Carbohydrate Polymers,* **101 (1)**, 1018-1026, (2014).
24. Meiorin C, Muraca G, Pirota K.R, Aranguren M.I, Mosiewicki M.A, "Nanocomposites with superparamagnetic behavior based on a vegetable oil and magnetite nanoparticles", *European Polymer Journal*, **53(1)**, 90-99 (2014)
25. U. M. Casado, M. I. Aranguren, N. E. Marcovich, "Preparation and characterization of conductive nanostructured particles based on polyaniline and cellulose nanofibers", *Ultrasonics Sonochemistry*, 21(5), 1641-1648 (2014)
26. Calvo-Correas, T., Mosiewicki, M.A., Corcuera, M.A., Eceiza, A, Aranguren, M.I., "Linseed oil-based polyurethane rigid foams: Synthesis and characterization", *Journal of Renewable Materials*, 3 (1). 3-13 (2015).
27. Mirna A. Mosiewicki, Piotr Rojek, Sławomir Michałowski, Mirta I. Aranguren, Aleksander Prociak, "Rapeseed oil-based polyurethane foams modified with glycerol and cellulose micro/nanocrystals", *J. Applied Polymer Science*, 132(10) March 10, 2015. artic. No: *41602, doi:* 10.1002/app.41602
28. Meiorin C, Aranguren M.I, Mosiewicki M.A, "Polymeric networks based on tung oil: reaction and modification with green oil monomers", *European Polymer Journal*, **67 (10)**, 551-560 (May 2015). http://dx.doi.org/10.1016/j.eurpolymj.2015.01.005
29. E. Krause, M.M. Reboredo, M.I.Aranguren, "Natural Fiber-polypropylene composites made from Caranday palm", *Journal of Renewable Materials,* **4 (2),** 101-112, April 1st, 2016, http://dx.doi.org/10.7569/JRM.2164.634144
30. Mirna A. Mosiewicki, Mirta I. Aranguren "Recent Developments in Plant Oil Based Functional Materials". This is a comissioned review paper. *Polymer International* **65 (1)**, 2838 (January 2016) doi: 10.1002/pi.5033.

31. Juan M. Buffa, María Alejandra Grela, Mirta I. Aranguren, Verónica Mucci, "EPR spectroscopy applied to the study of the TEMPO mediated oxidation of nanocellulose". *Carbohydrate Polymers,* **136**, 744-749 (January 2016) doi:10.1016/j.carbpol.2015.09.094
32. C. Meiorin, O. Moscoso-Londoño, D. Muraca, L. M. Socolovsky, K. R. Pirota, M. I. Aranguren, M. Knobel and M.A. Mosiewicki, "Magnetism and Structure of Nanocomposites Made from Magnetite and Vegetable Oil Based Polymeric Matrices" *Materials Chemistry and Physics,* **175**, 81-91, (June 2016).
33. Piotr Rojek, Mirta I. Aranguren, Aleksander Prociak, Mirna A. Mosiewicki, "Solid "green" polyurethanes based on rapeseed oil polyol and modified with glycerol and microcellulose", *J. Renewable Materials,* **4 (4)**, 266-274, 2016, http://dx.doi.org/10.7569/JRM.2016.634113

34. Facundo Altuna, Borja Fernandez DÁrlas, Marian Corcuera, Arantxa Eceiza, Mirta Aranguren, and Pablo Stefani "Synthesis and Characterization of Polyurethane Rigid Foams from Soybean Oil-Based Polyol and Glycerol", *J. Renewable Materials,* **4 (4)**, 275-284, 2016, http://dx.doi.org/10.7569/JRM.2016.634120
35. M. E. Victoria Hormaiztegui, Verónica Mucci, Santamaria-Echart, A., M. Ángeles Corcuera, Arantxa Eceiza and Mirta I. Aranguren, "Waterborne polyurethane composites reinforced with microfibrillated cellulose", *J App.Polym.Sci.*, **133 (47)**, 44207, 2016 On line-early view: 13 Aug 2016, DOI: 10.1002/app.44207
36. Carlos Macchi, Cintia Meiorin, Mirna A. Mosiewicki, Mirta I. Aranguren, Alberto Somoza, "Effect of the composition and chemical aging in tung oil-styrene networks: free volume and dynamic-mechanical properties", *European Polymer Journal*, **87** 231–240, 2017, http://dx.doi.org/10.1016/j.eurpolymj.2016.12.016
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53. Mirta I. Aranguren, Norma E. Marcovich, "How recent approaches to improve the nutritional quality of chocolate affect processing and consumer acceptance". *Current Opinion in Food Science*, Online 7 January 2023, 100988

CONFERENCES AND INVITED TALKS (in scientific meetings and institutions, since 2010)

Invited Seminars (Universities and other Institutions)

1. VTT - Technical Research Centre of Finland Functional Fibre Products, "Polymers, composites and nanocomposites from bio-mass. A short view on the use of vegetable oil, cellulose and chitosan", presnted in VTT Espoo, Finlandia, (19 Sept. 2013).
2. Åbo University (Åbo Akademi), Laboratory of Fibre and Cellulose Technology, "Bio-derived Polymers and Composites: Examples of Structural and Functional Material", dictado en Åbo University, Åbo (Turku), Finlandia, (20 Sept. 2013).
3. International Foundation for Sciences (IFS), "On a career that began with an IFS grant", presentado en IFS, Estocolmo, Suecia (24 Sept. 2013).
4. Centro de Investigación y Extension Forestal Andino Patagónico (CIEFAP), "Nanotecnología y Biomasa como fuente de nanomateriales", Esquel, Chubut, 31 Jul. 2014.
5. University of Natural Resources and Life Sciences (Universität für Bodenkultur, BOKU), "Nanocellulose: A novel and promising bio-nanomaterial...and other (ecomaterials) stories from the end of the world", Viena, Austria, 1 Sept. 2014.
6. Universidad del País Vasco (Euskal Herriko Unibersitatea), "Materiales compuestos basados en Aceites Vegetales: Propiedades Estructurales y funcionales", Donostia-San Sebastián, España, 15 Sept. 2014.
7. Universidad de Buenos Aires (UBA), Departamento de Química Orgánica, "Sobre el aprovechamiento de la biomasa en la formulación de nuevos materiales: Polímeros y compuestos a partir de aceites vegetales", Buenos Aires, 6 May 2015

Universita di Sassari, Departmento di Chimica et Pharmacia, "Waterborne-PU Films and Composites Based on Renewable Resources", Sassari, Sardinia, Italy, 15 June 2017.

8. Stony Brook University, Department of Materials Science and Chemical Engineering (New York, USA), Online Departmental Colloquium, "Vegetable oils as a renewable platform for the production of new materials", April 14, 2021

Invited talks and conferences in scientific meetings since 2010

1. Mariana Pereda, Norma Marcovich, Mirta I. Aranguren, "Comparison of Different Methods of Crosslinking Sodium Caseinate Films", POLYCHAR18 - World Forum on Advanced Materials, 7 al 16 de Abril, 2010, Siegen, Germany (invited talk).
2. M.I. Aranguren, "Bio-nanocompuestos: Una nueva visión de la celulosa como fuente de nanorefuerzos", Jornadas Agrobioenvases 2010 (Avances en tecnología de películas & coberturas funcionales en alimentos), Buenos Aires, 17-18 Mayo de 2010 (conferencia plenaria).
3. Mirna A. Mosiewicki, Ulises Casado, Norma E. Marcovich, Mirta I. Aranguren "Green composites from Tung Oil and Cellulosic Reinforcements", TWOWS Fourth General Assembly and International Conference: Women Scientists in a Changing World, Beijing, China, June 2010 (invited talk, participation by invitation only).
4. M.I. Aranguren, "Nanotecnología a partir de bio-productos: Biomasa como fuente de nanopartículas y nanofibras". Disertante invitado en el Encuentro de Nanotecnología para la Industria y la Sociedad (Panel sectorial de Nanotecnología Aplicada a la Industria Alimenticia) organizado por la Fundación Argentina de Nanotecnología (FAN) en conjunto con la Agencia de Desarrollo Estratégico de Mar del Plata, los días 5 y 6 de Mayo de 2011 en la Ciudad de Mar del Plata, Provincia de Buenos Aires (conferencia plenaria).
5. M.I. Aranguren, Conference in Inter-Continental Advanced Materials for Photonics, I-CAMP'11 Summer School llevada a cabo en Argentina-Uruguay (May 28-June 17, 2011). "Preparation and characterization of bio-nanofibers and their suspensions: Cellulose nanocrystals" and
6. also "Polymer composites from nano-cellulose", BsAs, 6 de Junio de 2011.
7. M.I. Aranguren, Plenary conference in Jornadas de Ciencia y Tecnología de la Universidad Nacional de Luján 2011, Café Científico "Nanotecnología y sus aplicaciones en el área de alimentos", Luján, 29-31 Aug. 2011).
8. M.I. Aranguren, ¿Las nuevas nanopartículas y nanofibras serán "verdes"?. Conference in Nanotecnología para la Industria y la Sociedad, Posadas, 13 June 2013.
9. M.I. Aranguren, "Aceites Vegetales: Fuente de una nueva (y variada) generación de polímeros y compuestos", X Simposio Argentino de Polímeros (SAP 2013), Buenos Aires, 28 a 30 Aug.2013.
10. M.I. Aranguren, "Agroindustria como proveedora de nanotecnología:Bio-nano-partículas / fibras", NanoMercosur 2013, 12-14 Nov. 2013.

11. M.I. Aranguren, Plenary conference, "Polisacáridos: biopolímeros, nanofibras and biocompuestos", I Workshop: Polímeros Biodegradables y Biocompuestos, 5-6 Dec. 2013
12. Mirta I. Aranguren, Cintia Meiorin, Mirna A. Mosiewicki Plenary conference. "Structural and Functional Polymeric Materials from Plant Oils", BIPOCO 2014, 24-28 August 2014, Visegrad, Hungary.
13. Mirta I. Aranguren "Quitosano: Potencialidades de un Biopolímero Versátil", Simposio Biopolímeros de Origen Entomológico, IX Congreso Argentino de Entomología, Posadas, Misiones, Argentina, 19 - 22 May 2015.
14. Mirta I. Aranguren "Polímeros y materiales compuestos derivados de la industria agrícola/ Agro-based polymers and composite materials" Simposio de Bioeconomía (MINCyT), Rosario, 25 - 26 June 2015.
15. Mirta I. Aranguren "From Vegetable Oils to New Polymers and Composites", Plenary conference in XI Simposio Argentino de Polímeros-SAP 2015, Santa Fé, 20 - 23 Oct. 2015.
16. M.I. Aranguren "La alternativa de los Materiales Bioderivados", IV Jornadas Marplatenses de Estudiantes de Ingeniería, IV JorMEI, Facultad de Ingeniería, UNMdP, 2 Sept. 2016.
17. Mirta I. Aranguren, Opening plenary conference, "Vegetable Oils: A widely available source of raw materials for polymers and composites", 7th Workshop on Green Chemistry and Nanotechnologies in Polymer Chemistry- IV National Conference on Nanotechnoscience -4th National Conference on Polymers- ADAM 2016, Costa Rica September 21th -23th, 2016.
18. Mirta I. Aranguren, Keynote speaker. "Bio-based nanoparticles and derived composites. Nanocellulose" 7th Workshop on Green Chemistry and Nanotechnologies in Polymer Chemistry- IV National Conference on Nanotechnoscience -4th National Conference on Polymers- ADAM 2016, Costa Rica September 21th -23th, 2016.
19. Mirta I. Aranguren, Keynote speaker. "Bio-composites based on vegetable oils and lignocellulosics" I&S Workshop- Insights and strategies towards a bio-based economy, Montevideo, Uruguay, on November 22th to 25th, 2016.
20. Mirta I. Aranguren "Aprovechamiento de la biomasa en la producción de materiales estructurales y avanzados", Simposio Bioeconomía Argentina-Región Centro Pampeana Sur, MINCyT, 12 -13 Dec. 2016.
21. Mirta I. Aranguren "Celulosa, aceites vegetales y Fibras naturales" Workshop Biomateriales-Aprovechamiento de subproductos y residuos orgánicos de origen industrial (Subsecretaría de Innovación Tecnológica del Chaco), Resistencia, Chaco, May 31- June 1st 2018.
22. Mirta I. Aranguren Plenary conference. "Films and composites from cellulose nanocrystals: Thermal, viscoelastic and mechanical properties", Materials Science Engineering European (MSE) Congress and Exhibition on Advanced Materials and Processes. Darmstadt, Germany, September 26th- 28th, 2018.
23. Mirta I. Aranguren "Back to the roots: new uses for old cellulose", Simposium to honor Prof. Christopher W. Macosko at his retirement, Octubre 13rd, 2018, University of Minnesota, Minneapolis, MN, USA.
24. Mirta I. Aranguren, Plenary conference "Cellulose revival: the nano-trend that led to a rediscovery with huge potential", IV BIOPOLI 2020, IV Workshop de Polímeros Biodegradables y Biocompuestos, 23-25 Aug. 2021, Mar del Plata, Argentina.
25. Mirta I. Aranguren, "Towards a greener future for polyurethanes: Biobased polyurethane aqueous dispersions", World Congress on Chemical Engineering, WCCE11, Session Conference for the area Materiales y Nanotecnología, BsAs, Argentina, June 4 -8, 2023

Additionally, she has also coauthored other 265 works presented as oral or posters in national and international scientific events.

Communication of science to the general public

Appearance in magazines, paper journals, internet sites, radio and TV programs mostly for interviews and once as a panelist in a program of a national TV channel to discuss bioeconomy present and prospective.

The subjects dealt with, in other occasions, were:
the creation and activities of the Group of Ecomaterials in INTEMA (as its first director),
the significance of nanotechnology, in particular the use of nanocellulose;
also in occasions of receiving different awards (Guggenheim fellowship, Iberoamerican award to the Innovation, award from the ANCFEN to the life carrier in Engineering, being listed among the most cited researchers in the world (PLOS))
and as panelist in open talks to the public representing women in science, and the challenges of balancing familiar and scientific life.