Agustín Ríos

Professor

27th November 1986
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Professional webpage

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Activities

I have a PhD in Materials Science. My research focuses on the study of the relationship between the structure, molecular mobility and functional transport and thermomechanical properties through a multiscale experimental approach with a current focus on biosourced thermoplastic and thermoset polymers. My teaching activities cover Chemistry and Polymer Science at Bachelor's and Master's levels.

Scientific Skills

Modulated DSC, DMA, ^{1}H & ^{13}C Solid State NMR, Dielectric Spectroscopy, X-Ray Diffraction, Transport & Mechanical properties of Polymers

Metrics

Google Scholar profile

Languages

Spanish: Native French: Bilingual
English: Bilingual German: Proficient

Informatics

LaTeX, IgorPro, TA Trios & Universal Analysis, WinFit, TopSpin, MestReNova Office

Professional Experiences & Higher Education

Since 2025	Professor *Polytech Lyon* *Ingénierie des Matériaux Polymères*	*Lyon (FR)*
Since 2023	Habilitation as Research Director *Multiscale experimental physico-chemical approach for functional and biosourced polymers*	*Créteil & Thiais (FR)*
2016-2025	Associate Professor *Université Paris Est Créteil* *Institut de Chimie et des Matériaux Paris Est*	*Parisian Region (FR)*
2014-2016	Post-doc: Centre de Recherche sur les Macromolécules Végétales	*Grenoble (FR)*
2012-2014	Post-doc: Lehrstuhl für Polymere Werkstoffe Universität Bayreuth	*Bayreuth (DE)*
2009-2012	Ph.D. in Materials Science Laboratoire Polymères et Matériaux Avancés - U. Lyon I	*Lyon (FR)*
2004-2009	Engineering Degree in Chemistry & Polymers Institut National des Sciences Appliquées	*Rouen (FR)*

Current Research Projects

2025-2029	REMDHYS Research project member *Recycled Metals for Aboveground Hydrogen Storage*	*ERC Horizons Funding*
Since 2025	Vitrimers for aerospace applications *Characterization of current and proposition of biosourced alterantive vitrimers*	*w/ Airbus SE (DE)*
2023-2026	BIO ART Research project co-ordinator *Optimization of Mechanical Properties of BIO-sourced Epoxy Resins by ARTificial Intelligence*	*ANR-DFG Funding*
Since 2020	Ageing of polyurethane foams *Thermal ageing study by ^{1}H DQ NMR*	*w/ COVESTRO AG* (DE)
Since 2019	Epoxy resins mechanical behavior *Structural network characterization by ^{1}H DQ NMR*	*w/ U. Bayreuth* (DE)
Since 2018	Biocompatible polymer networks *Synthesis & DMA & ^{1}H DQ NMR network characterization*	*w/ U. Tweente & U. Melbourne* (NL/AU)
Since 2016	Relationship between structure & mechanical properties *Biosourced thermoplastic and thermoset polymers* *Multiscale experimental approach*	*ICMPE*

Selected Publications

- Champion, M., Rios de Anda, A., Dufour, I., Vallée-Réhel, K., Linossier, I., Magueresse, A., Vignaud, G., Balnois, E., Hellio, C., Faÿ, F., Modulation of marine bacterial adhesion on ultra-soft cross-linked chitosan coatings, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 137205, *2025*.
- Khaled, T., Rios de Anda, A., Richaud, E., Macromolecular and mechanical changes in aged silicones, *Polymer Degradation and Stability*, 111211, *2025*.
- Rios de Anda, A., Ettori, A., Nishiyama, Y., Mazeau, K., Vergelati, C., Heux, L., Influence on the structureand the molecular mobility of cellulose–diamine complexes studied by a multiscale experimental approach, *Cellulose* 31, 2713, *2024*.
- Demleitner, M., Hübner, F., Mainz, A., Ruckdäschel, H., Altstädt, V., Michely, L., Rios de Anda, A., Influence of network structure determined by Time-domain 1H Double Quantum NMR on the creep properties of non-stoichio metric epoxy-amine resins aimed for chemical anchoring applications, *Polymer* 286, 126373, *2023*.

Selected Publications

- Brelle, L., Rios de Anda, A., Ozturk, T., Didier, N., Renard, E., Langlois, V., Biocompatible Semi-Interpenetrating Materials Based on Poly(3-hydroxy alkanoate)s and Poly(ethyleneglycol) Diacrylate, *Gels* 8(10), 632, *2022*.
- Mattar, N., Hübner, F., Demleitner, M., Brückner, A., Langlois, V., Renard, E., Ruckdäschel, H., Rios de Anda, A., Multiscale Characterization of Creep and Fatigue Crack Propagation Resistance of Fully Bio-Based Epoxy-Amine Resins, *ACS Appl. Polym. Mat.* 3(10), 5134-5144, *2021*.
- Mattar, N., Langlois, V., Renard, E., Rademacker, T., Hübner, F., Demleitner, M., Altstädt, V., Ruckdäschel, H., Rios de Anda, A., Fully Bio-Based Epoxy-Amine Thermosets Reinforced with Recycled Carbon Fibers as a Low Carbon-Footprint Composite Alternative, *ACS Appl. Polym. Mat.* 3(1), 426-435, *2021*.
- Bochove, B., Spoljaric, S., Seppälä, J., Rios de Anda, A., Multiscale structural characterization of biocompatible poly (trimethylene carbonate) networks photo-cross-linked in a solvent, *Polymer Testing* 90, 106740, *2020*.
- Mattar, N., Renard, E., Langlois, V., Rios de Anda, A., Multiscale Network Structure Analysis by Time Domain ^{1}H DQ NMR and DMA of Resorcinol Diglycidyl Ether-Jeffamine Matrices, *ChemistrySelect* 5(36), 11291-11298, *2020*.
- Hübner, F., Szpoganicz, E., Demleitner, M., Kuhnigk, J., Altstädt, V., Rios de Anda, A., Time Domain ^{1}H NMR, Thermomechanical, and Rheology Multiscale Structural Characterization of Polydimethylsiloxane-Toughened Epoxy Nanocomposites for Liquid Composite Molding, *ACS Appl. Polym. Mat.* 2(11), 4779-4789, *2020*.
- Mattar, N., Rios de Anda, A., Vahabi, H., Renard, E., Langlois, V., Resorcinol-Based Epoxy Resins Hardened with Limonene and Eugenol Derivatives : From the Synthesis of Renewable Diamines to the Mechanical Properties of Biobased Thermosets, *ACS Sust. Chem. & Eng.* 8(34), 13064-13075, *2020*.
- Rios de Anda, A., Sotta, P., Modjinou, T., Langlois, V., Versace, D.-L., Renard, E., Multiscale Structural Characterization of Biobased Diallyl–Eugenol Polymer Networks, *Macromolecules* 53 (6), 2187-2197, *2020*.
- Nguyen, Q.-B., Nguyen, N.-H., Rios de Anda, A., Nguyen, V.-H., Versace, D.-L., Langlois, V., Naili, S., Renard, E., Photocurable bulk epoxy resins based on resorcinol derivative through cationic polymerization, J. Appl. Polym. Sci. 137(36), 49051, *2020*.
- Bochove, B., Spoljaric, S., Seppälä, J., Sotta, P., Rios de Anda, A., Multiscale Structural Characterization of Biocompatible Poly (trimethylene carbonate) Photoreticulated Networks, *ACS Appl. Polym. Mat.* 1(7), 1811-1820, *2019*.