

OLIVIER BOULAN

PROFILE

I am a responsible and involved chemist engineer in a PhD dedicated to thermoplastic elastomer synthesis for tire applications.



CONTACT

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Nationality: French

EDUCATION

➤ 2023-2024

Dual degree with M2 Materials and Sustainable Development master courses from *University Claude Bernard Lyon 1* and *Ecole Centrale of Lyon*

Specialization courses: advanced macromolecular engineering methodologies, polymers and composites damaging, materials and multi-materials for the field of energy, functional materials for membranes and coatings, micro and nano-structuration of polymers

Project: improvement of ultra-high molecular weight polyethylene properties in joint replacement prosthetics for arthroplasty

➤ 2020-2024

CPE Lyon, Graduate Chemistry Engineering School; Formation in molecular chemistry, physical chemistry and inorganic chemistry, analytics, process engineering

Specialization courses: analysis strategies, macromolecular engineering for industrial polymer materials, macromolecular synthesis, nanomaterials, polymerization engineering

Projects: - improvement of recovery rate of water effluents from cooling towers
- development of automated intrinsic viscosity analysis of polymers

WORK EXPERIENCE

- **2024-Present Michelin** (Clermont-Ferrand, France): firm conceiving and producing rubber tires; **CP2M, CNRS Laboratory** (Lyon, France): laboratory dedicated to polymer synthesis and characterization.

Thesis dedicated to the synthesis and characterisation of new thermoplastic elastomers and reversibly reticulated thermoplastic elastomers for applications in tire industry.

- **2024 Henkel AG & Co KGaA** (Düsseldorf, Germany): firm conceiving and producing adhesives. Master thesis project. Six months research project on the recycling of silane-modified polyurethane adhesives, i.e. SMP. Design of a method for the controlled chemical degradation of thermosets, synthesis of modified polymers and study of the maintenance of the mechanical properties of the network. Development of a process for carrying out the reaction on adhesive applied on site. Tutor: Dr. Jan-Erik DAMKE (jan-erik.damke@henkel.com)

- **2023 Henkel AG & Co KGaA** (Düsseldorf, Germany). Six months research project on tin-based catalysts replacement in silane-modified polymer construction adhesives. Study of the interactions between the catalyst and the different parts of the system (reagents, co-catalysts, fillers) and their influence on the use properties of the product, especially tensile strength and application time. Tutor: Dr Jan-Erik DAMKE (jan-erik.damke@henkel.com)

- **2022 CP2M, CNRS Laboratory** (Lyon, France). Six months research project on ultra-high molecular weight polyethylene. Characterization of native crystalline structure and its reorganization for understanding its unique thermal and mechanical behaviour, using combination of thermal analysis techniques (DSC, flash DSC, dissolved polymer DSC), viscosity analysis (IVA) and chromatography techniques (SEC, TGIC, CEF) Tutor: Dr Olivier BOYRON (olivier.boyron@univ-lyon1.fr)

SKILLS

Languages (CEFR levels): English: C1, Italian: B1, Chinese: A2, German: Beginner

Computer competences:

♦ in publishing, handling, and sharing of information:

Microsoft Word, Excel, PowerPoint, Teams ☆☆☆☆☆

Google Docs, Sheets, Slides, Drive ☆☆☆☆☆

Adobe Photoshop Elements & Premiere Elements ☆☆☆☆☆

♦ In other fields:

Audacity ☆☆☆☆☆

Python, Matlab ☆☆☆☆☆

NX Siemens, SolidWorks ☆☆☆☆☆

HOBBIES / ACTIVITIES

Dance: Hip-hop, Breakdance, Krump, (5 years of practice)

Skiing, snowboarding, water-skiing, wakeboarding

Reading: novels, manga, scientific press

Hiking