

Silicone recycling

CONTEXT

Saint-Gobain, global leader in sustainable habitat, designs, manufactures, and markets innovative solutions in the field of construction products and high-performance materials. Silicone materials, particularly used in the life sciences sector for fluid transfer, are mostly single-use to avoid contamination issues. Their recycling, both at the production waste level and after use, is crucial to reduce waste and the use of virgin raw materials, thus contributing to carbon neutrality goals by 2050. Chemical recycling can produce oils that, if properly controlled and possessing specific properties, could be reused in other materials within the Saint-Gobain group.



OBJECTIVES OF THE POST-DOCTORAL RESEARCH

The objective of this research aligns with Saint-Gobain's commitment to reducing the carbon footprint of its products. Thus, the challenge will be to develop sober, efficient and innovative recycling pathways for silicone materials into reactive oils or resins enabling the further preparation of materials with a minimized environmental footprint. The structures and physicochemical properties of the obtained silicone derivatives will be characterized, and the recycling routes will be optimized to meet the expected specifications. The applicative performance of the obtained products will be evaluated at the Saint-Gobain research center. The post-doctoral researcher may also participate in the evaluation of certain products obtained at Saint-Gobain Research Paris.

PROFILE

Holder of a PhD in organic chemistry or polymer chemistry. Knowledge in the field of polymer recycling and materials science is a plus. Initiative, creativity, and a strong inclination for experimentation are required to successfully carry out this project.

DURATION

12 months

SALARY

~ 2800 € gross monthly

LOCATION

INSA Lyon : Etienne Fleury and Daniel Portinha team (contract established between this laboratory and the post-doctoral fellow).

CONTACTS

daniel.portinha@insa-lyon.fr ; etienne.fleury@insa-lyon.fr
morgane.petit@saint-gobain.com

A PROPOS DE SAINT-GOBAIN

Leader mondial de la construction durable, Saint-Gobain conçoit, produit et distribue des matériaux et services pour les marchés de l'habitat et de l'industrie. Développées dans une dynamique d'innovation permanente, ses solutions intégrées pour la rénovation des bâtiments publics et privés, la construction légère et la décarbonation du monde de la construction et de l'industrie apportent durabilité et performance. L'engagement du Groupe est guidé par sa raison d'être « MAKING THE WORLD A BETTER HOME ».

47,9 milliards d'euros de chiffre d'affaires en 2023, 160 000 collaborateurs dans 76 pays

Engagé à atteindre la Neutralité Carbone à 2050

Pour en savoir plus sur Saint-Gobain, visitez <http://www.saint-gobain.com> et suivez-nous sur Twitter @saintgobain.

Saint-Gobain Research Paris est l'un des huit grands centres de recherche transversaux qui servent toutes les activités de Saint-Gobain : <https://www.sgr-paris.saint-gobain.com/>