

## **Dr. Arnaud FAVIER**

44 years-old

French nationality

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**UMR 5223 – Ingénierie des Matériaux Polymères**

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CNRS – Research Scientist (01/2009)

Expertise: Polymer chemistry, Polymers for biosciences and biomedical applications, polymer bioconjugates, fluorescent polymer probes, polymer and hybrid nanoparticles

Research area : Fluorescent polymer probes for infectiology and cancerology

2008-2015 : Hosted team in transdisciplinary Joliot-Curie Laboratory USR CNRS 3010 – Ecole Normale Supérieure de Lyon

(Co-)Supervision of 6 PhD thesis, 1 post-doc, 11 master students and 4 research engineers

Reviewer for several polymer science journals (ACS Publication, RSC Publishing, Elsevier, Wiley), President of ITECH Lyon admission jury, Organizing committee of the European Polymer Federation Congress 2017, Workshop *Fluorescence imaging and polymers: applications to materials and life sciences* 2019, Groupe Français des Polymères GFP 50<sup>th</sup> anniversary Congress 2020/21.

### **CAREER**

**Staff Scientist**, RELYPSA, Inc. (now Vifor Pharma) (2007-2008) Santa Clara, CA 95054, USA

**Scientist**, ILYPSA, Inc. (now Amgen) (2006-2007) Santa Clara, CA 95054, USA

**Post-Doc**, Université Aix-Marseille (2004-2006), Laboratoire Chimie-Provence, Equipe Chimie Radicalaire Organique et Polymères de Spécialité, Marseille, France. Dir. D. Bertin

**Research Associate**, The University of New South Wales (2003-2004), Centre for Advanced Macromolecular Design, Sydney, Australia. Dir. T. P. Davis

**PhD thesis**, Université de Lyon (1999-2002), *Synthesis of controlled (co)polymer architectures by the RAFT process for biological diagnostic and gene delivery applications*, UMR CNRS/bioMérieux, ENS Lyon, France. Dir. C. Pichot

**MSc**, Université de Lyon (1998-1999), UMR CNRS/bioMérieux, ENS Lyon, France

**Diplôme d'ingénieur** - Institut Textile et Chimique de Lyon (ITECH) (1999)

### **SCIENTIFIC COMMUNICATIONS**

3 Patents, 2 Book Chapters, 1 Review article, 32 Peer-reviewed Articles, 28 Invented lectures and seminars, 90 oral (43) and poster (47) communications in international (42) and national (48) conferences. h-index: 16, 1391 total citations, 45 average citations per article.

### **TECHNOLOGY TRANSFER**

Everspark: Innovative buffer for super-resolution optical microscopy ([idylle-labs.com/everspark-by-eternity](http://idylle-labs.com/everspark-by-eternity)), 2020.

## **SELECTED PUBLICATIONS**

Favier A.; Charreyre M.-T. Experimental requirements for an efficient control of free-radical polymerizations via the reversible addition-fragmentation chain transfer (RAFT) process. *Macromol. Rapid Commun.*, 27, 653-692, 2006.

Favier, A.; de Lambert, B.; Charreyre, M.-T., Toward New Materials Prepared via the RAFT Process: From Drug Delivery to Optoelectronics? In *Handbook of RAFT Polymerization*, Wiley-VCH Verlag GmbH & Co. KGaA pp 483, 2008.

Cepraga C., Gallavardin T., Marotte S., Lanoë P.-H., Mulatier J.-C., Lerouge, F., Parola S., Lindgren M., Baldeck P. L., Marvel J., Maury O., Monneréau C., Favier A., Andraud C., Leverrier Y., Charreyre M.-T. Biocompatible Well-Defined Chromophore-Polymer Conjugates for Photodynamic Therapy and Two-Photon Imaging. *Polym. Chem.* 4, 61-67, 2013.

Favier, A.; Duret, D.; Charreyre, M. T. Process of preparation of a polymer by sequential addition of monomers. *Patent* FR 3 020 634, 2014

Adjili S., Favier A., Fargier G., Thomas A., Massin J., Monier K., Favard C., Vanbelle C., Bruneau S., Peyriéras N., Andraud C., Muriaux D., Marie-Thérèse Charreyre M.-T. Biocompatible photoresistant far-red emitting fluorescent polymer probes with near-infrared two-photon absorption for living cell and zebrafish embryo imaging. *Biomaterials*, 46, 70-81, 2015.

Lacour W., Adjili S., Blaising J., Favier A., Monier K., Mezhoud S., Ladavière, C., Place C., Pécheur E. I., M.-T. Charreyre Far-red fluorescent lipid-polymer probes for an efficient labeling of enveloped viruses. *Adv. Healthcare Mater.*, 5, 2032-2044, 2016.

Duret, D., Grassin A., Henry M., Jacquet T., Thoreau F., Denis-Quanquin S., Coll J.-L., Boturyn D., Favier A., Charreyre M.-T. "Polymultivalent" Polymer-Peptide Cluster Conjugates for an Enhanced Targeting of Cells Expressing  $\alpha v \beta 3$  Integrins. *Bioconj. Chem.*, 28, 2241-2245. 2017.

Duret D., Haftek-Terreau Z., Carretier M., T. Berki, Ladavière C., K. Monier, P. Bouvet, J. Marvel, Y. Leverrier, Charreyre M.-T., Favier A. 2018. Labeling of native proteins with fluorescent RAFT polymer probes: Application to the detection of a cell surface protein using flow cytometry *Polym. Chem.*, 9, 1857-1868, 2018.

Provost A., Rousset C., Bourdon L., Mezhoud S., Reungoat E., Fourneaux C., Bresson T., Pauly M., Béard N., Possi-Tchouanlong L., Grigorov B., Bouvet P., Diaz J.-J., Chamot C., Pécheur E. I., Ladavière C., Charreyre M.-T., Favier A., Place C., Monier K. Innovative particle standards and long-lived imaging for 2D and 3D dSTORM. *Sci. Rep.*, 9:17967, 2019

Berki, T.; Bakunts, A.; Duret, D.; Fabre, L.; Ladavière, C.; Orsi, A.; Charreyre, M.-T.; Raimondi, A.; van Anken, E.; Favier, A. Advanced Fluorescent Polymer Probes for the Site-Specific Labeling of Proteins in Live Cells Using the HaloTag Technology. *ACS Omega*, 4 (7), 12841. 2019