



Short CV Pr. Maurice BROGLY

Research team : Chemistry and Physical Chemistry of Polymers

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Personal Data

Nationality : French Citizen

Date of Birth : November 16, 1967

Marital Status : Married, one child

Education

2001 Full Professor – University of Haute Alsace

Materials Chemistry and Polymer Science

1994 Assistant Professor – University of Haute Alsace

Materials Chemistry and Polymer Science

1993 Post-doctoral position “French-German Army Research Institute”

1992 PhD Thesis – “Adhesion Mechanisms of Pressure Sensitive Adhesives” in collaboration with Elf Atochem Company (1989-1992) – With Distinction

Honors

MRS Spring Meeting **Silver Award** – San Francisco (CA) - 2003

Adhesion Society Rolf Schubert **Distinguished Award** – Orlando (FL) - 2001

Best communication of the **Adhesion Society** – Hilton Head (SC) - 1997

Professional skills

Head of Research Team « Chemistry and Physical Chemistry of Polymers » - LPIM

Associate Editor of Journal of Adhesion (since 2005)

President of the **Scientific Council** of the **Center for Technology Transfert** (CTTM) – Université du Maine / Le Mans (since 2009)

Member of the **Advisory Board** of the **Dutch Polymer Institute** (DPI) (since 2008)

Member of the **French National Polymer Teaching Commission** (GFP) (since 2008)

Vice – Head of the **Doctoral School** « Jean Henri Lambert » - University of Haute Alsace (1998-2008)

Member of the **Board of Directors** of the **Faculty of Sciences and Technics** – University of Haute Alsace (since 2004)

Head of Chemistry Department of the **Faculty of Sciences and Technics** – University of Haute Alsace (since 2004)

Member of the **Board of Directors** of the « **Nef des Sciences** », a national Center dedicated to Scientific, Technical and Industrial Culture (since 2010)

Member of the **Board of Directors** of the **French Group of Vibrational Spectroscopy** (since 2000)

Head of the **Master degree in Material Sciences** – University of Haute Alsace (since 2005)

Head of the **Master degree in Polymer Sciences** – University of Haute Alsace (since 2005)

Member of the **Scientific Committee** of **4th World Congress on Adhesion and Related Phenomena** – WCARP IV / Arcachon / 26-30 septembre 2010

Member of the **Scientific Committee** of the **2nd International conference on Structural Adhesive Bonding** / Porto / 4-5 july 2013

Scientific expert for **ANR** and **ANRT** national scientific agencies

President or **Referee** for **20 PhD thesis**

Director of **15 PhD thesis**, **5 Post-doc** and **15 Master degree students**

Scientific production :
62 publications
40 invited conferences
160 communications

Research Topics

Polymer surfaces and interfaces

Polymer thin films (adsorption, conformation, confinement, crystallization)

Polymer coatings

Fundamental aspects of adhesion and nanoadhesion

Surface properties of polymer, biopolymer and polymer blends

FTIR advanced surface spectroscopy (PM-IRRAS)

Scanning probe microscopy (SPM) for the determination of nanoscale properties of polymer (Contact mode AFM)

Partnerships

EUROCORES Program Associated Partner – Friction and Adhesion in Nanomechanical Systems (FANAS - Integrated Framework for Engineering Bio-Mimetic Adhesive Interface (EBioAdI)) of the **European Science Foundation (ESF)**

French national research programs :

ACI Biosyami (2004-2008) « Biomimetic systems for starch synthesis » with **INRA Nantes (F)** and **University Paris Sud (F)**

ANR Adpolysurf (2007-2010) « Preparation of nano-organized and Adaptive Polymer Surfaces » with **University of Bordeaux (F)**

ANR Satin (2011-2014) « Safe tin : lowering energy and contaminants » with **AgroParisTech (F)** and **Oniris Nantes (F)**

Industrial partnerships (PhD or Post-doc students)

RHODIA

L'OREAL

ARCELOR

SOFICOR – MÄDER

NOVACEL

RAFLATAC

ARCELOR-MITTAL

GOODYEAR

RENAULT

MICHELIN

VIVATECH

HUTCHINSON

Relevant publications

Elastic recovery and creep properties of waterborne two-component polyurethanes investigated by micro-indentation

L. Chagnon, G. Arnold, S. Giljean, M. Brogly
Progress in Organic Coatings, **76**, 1337-1345 (2013)

Adsorption of alkanethiols on gold surfaces : PM-IRRAS study of the influence of terminal functionality on alkyl chain orientation

T. Elzein, A. Fahs, M. Brogly, A. Elhiri, B. Lepoittevin, P. Roger, V. Planchot
The Journal of Adhesion, **89**, 416-432 (2013)

Mechanisms of interfacial degradation of epoxy adhesive/galvanized steel assemblies: Relevance to durability

P. Calvez, S. Bistac, M. Brogly, J. Richard, D. Verchère
The Journal of Adhesion, **88**, 145-170 (2012)

Assesment of nanoadhesion and nanofriction properties of formulated cellulose-based biopolymers by AFM

M. Brogly, A. Fahs, S. Bistac
In **Nanoscience and Technology, Scanning Probe Microscopy in Nanoscience and Nanotechnology**, B.Bhushan Ed., Springer Berlin Heidelberg, Chap. 16, pp 473-504 (2011)

Hydroxypropyl methylcellulose (HPMC) formulated films : Relevance to adhesion and friction surface properties

A. Fahs, M. Brogly, S. Bistac, M. Schmitt
Carbohydrate Polymers, **80**, 105-114 (2010)

Contact atomic force microscopy : a powerful tool in adhesion science

M. Brogly, H. Awada, O. Noel
In **Nanoscience and Technology**, Applied Scanning Probe Methods XI, B.Bhushan & H. Fuchs Eds., Springer Berlin Heidelberg, pp 73-93 (2009)

Polystyrene chains orientation : A rubbed and non-rubbed polymer comparative study

A. Ghorbal, R. BenArfi, S. Bistac, M. Brogly
Chemical Physics Letters, **443**, 352-355 (2007)

Adhesion at the nanoscale : an approach by AFM

M. Brogly, O. Noel, G. Castelein and J. Schultz
In **Adhesion : Current Research and Applications**, Wiley-VCH, p. 33 (2005)

In situ determination of the thermodynamic surface properties of chemically modified surfaces on local scale: An attempt with the atomic force microscope

O. Noel, M. Brogly, G. Castelein, J. Schultz
Langmuir, **20**, 2707 (2004)

Structure, orientation and conformations of adsorbed Polyamides

T. Elzein, M. Brogly, G. Castelein, J. Schultz
J. Polym. Sci. Part B : Polym. Physics, **40**, 1464 (2002)

Adhesion properties of polymers

S. Bistac, M. Brogly
Encyclopedia of Surface and Colloid Science, Marcel Dekker Inc., New-York, p 108-118 (2001)

Persistence of molecular orientation in adsorbed ethylene-vinylacetate nanofilm studied by FTIR reflectance spectroscopy

M. Brogly, S. Bistac, J. Schultz
Macromolecules, **31**, 12, 3967 (1998)