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date of birth : 09/17/1979
citizenship : French

Curriculum Vitæ

Work experience

- February 2008 - Now **Associate Professor** - *ENSIACET-CIRIMAT - Toulouse (France)*
- Research area in the CIRIMAT Laboratory:**
Study of polymers interfaces and interphases
Adherence tests (three points flexure test)
- Teaching area in the ENSIACET engineer school:**
Polymer chemistry & materials science (lab work)
Adhesion and adherence in polymers (lectures)
- Sep. 2007 - Jan. 2008 **Post-Doctoral position** - *Nancy University - Nancy (France)*
Nanostructures and ferroelectric nanocomposites:
Synthesis, characterisation, applications
- Feb. 2006 - Aug. 2007 **Post-Doctoral position** - *ASPG - Saarbrücken (Germany)*
Study of DGEBA Prepolymer and Epoxy Network by DES.
- Oct. 2005 - Jan. 2006 **Post-Doctoral position** - *DGTec Industry - Lyon (France)*
Study of nanocomposite materials.
- Oct. 2002 - Sep. 2005 **PhD Thesis** - *IMP/LMM Laboratory - Lyon (France)*
Physico-chemical characterization of epoxy-amine / metal interphases
Characterisation of their constituents

Apparatus responsibility

DSC Netzsch (*Differential scanning calorimetry*)
FTIR microscope Perkin (*Infra-red imaging*)
Adherence test (*Three points flexure test by Instron*)
Zeta potential CAD (*Streaming potential and current*)
Contact angle goniometer, GBX (*Surface energy measurement*)

Languages

English (*Working knowledge*)
TOEIC : 850

German (*18 months in Germany*)
conversational German

Special skills

OS: *Windows, linux (ubuntu)*

Office softwares: *office, bibliography software*
scientific data analysis and visualisation solution
Mostly software under GNU General Public License

LaTeX, *bases on HTML*

Publications: Book Chapters and articles

V. Floch, Y. Doleyres, Sylvain Amand, Maëleann Aufray, Nadine Pébère, & D. Verchère, *Corrosion resistance and practical adhesion measurements in primer/ Hot-Dip Galvanized steel systems* , **The Journal of Adhesion** , *submitted*.

D. Samélor, A.-M. Lazar, M. Aufray, C. Tendero, L. Lacroix, J.-D. Béguin, B. Caussat, H. Vergnes, J. Alexis, D. Poquillon, N. Pébère, A. Gleizes, & C. Vahlas, *Amorphous Alumina Coatings: Processing, Structure and Remarkable Barrier Properties*, **Journal of Nanoscience and Nanotechnology** , 2011, 11(9), pp. 8387-8391.

A. Brochier, M. Aufray, W. Possart, *Dielectric Spectra Analysis: Reliable Parameter Estimation Using Interval Analysis* ,
in **Materials with Complex Behaviour** ,
Editors: A. Oechsner, L. da Silva & H. Altenbach,
publisher: SPRINGER, 2010, pp. 99-123.

M. Aufray, S. Menuel, Y. Fort, J. Eschbach, D. Rouxel, & B. Vincent,
New Synthesis of Nanosized Niobium Oxides and Lithium Niobate Particles and Their Characterization by XPS Analysis ,
Journal of Nanoscience and Nanotechnology , 2009, 9(8), pp. 4780-4785.

M. Aufray and A. A. Roche, *Is gold always chemically passive ? Study and comparison of the epoxy-amine/metals interphases* ,
Applied Surface Science , 2008, 254(7), pp. 1936 - 1941.

M. Aufray and A. A. Roche
Epoxy-amine/metal interphases: Influences from sharp needle-like crystal formation ,
International Journal of Adhesion and Adhesives , 2007, 27(5), pp. 387-393.

A.A. Roche, M. Aufray, and J. Bouchet, *The Role of the Residual Stresses of the Epoxy-Aluminium Interphase on the Interfacial Fracture Toughness* ,
The Journal of Adhesion , 2006, 82(9), pp.861-880.

M. Aufray and A. A. Roche, *Residual Stresses and Practical Adhesion: Effect of Organo-metallic Complex Formation and Crystallization* ,
Journal of Adhesion Science and Technology , 2006, 20(16), pp. 1889-1903.

M. Aufray et A. A. Roche, *Properties of the interphase epoxy-amine / metal: Influences from the nature of the amine and the metal* ,
in Adhesion - Current Research and Application , Editor: W. Possart,
publisher: WILEY, 2005, pp. 89-102.

M. Aufray, A. Brochier, & W. Possart,
Interval analysis applied to dielectric spectroscopy: a guaranteed parameter estimation ,
Sysid 2012, 16th IFAC Symposium on System Identification ,
11-13 July 2012, Brussels (Belgium).

D. Samélor, M. Aufray, L. Lacroix, C. Tendero, Y. Balcaen, J. Alexis, H. Vergnes,
D. Poquillon, J.-D. Béguin, N. Pébère, S. Marcellin, B. Caussat, & C. Vahlas,
*Mechanical and Surface Properties of Chemical Vapour Deposited Protective Aluminium
Oxide Films on TA6V Alloy* ,
CIMTEC 2010 - 12th International Ceramics Congress Part E ,
6-11 June 2010, Montecatini Terme (Italy).

M. Aufray, A. Brochier, W. Possart,
Set Inversion Via Interval Analysis applied to dielectric spectroscopy ,
ACE-X-2009 , 2009, Roma, Italy.

M. Aufray and A. A. Roche,
The durability of epoxy-metal interphase bonding joints ,
27th meeting of the Adhesion society , 2004, Wilmington, USA, pp. 367-369.

A. A. Roche and M. Aufray,
The durability of epoxy-metal interphase bonding joints ,
16th International Vacuum Congress , 2004, Venice, Italy.

M. Aufray and A. A. Roche,
Influence of amine characteristics on epoxy/amine - metal interphase properties ,
7th Euradh , 2004, Friebourg, Germany, pp.55-60.

A. A. Roche, J. Bouchet, and M. Aufray, *Longitudinal Young's modulus, residual stresses and practical adhesion of organic layers applied onto metallic substrates* ,
12th International Conference on Thin Films , 2002, Bratislava, Slovakia,
pp.106-107.

A. A. Roche, J. Bouchet, and M. Aufray, *Practical adhesion and residual stresses:
Ultimate parameters versus critical strain energy release rate* ,
6th Euradh , 2002, Glasgow, United Kingdom, pp.53-57.