



Dr Julien Vieillard



Assistant professor

Bioorganic team

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PROFESSIONAL EXPERIENCES

- 2007- Assistant professor, Rouen Normandy University, France.
2006-2007 Postdoctoral Associate; Advisor: Prof. Desbène, Normandy University, France.
2005-200 Postdoctoral Associate; Advisor: Dr. Krawczyk, Engineering school Ecole centrale de Lyon, France.

EDUCATION

- 2003-2007 Ph.D. microelectronic, Engineering school Ecole centrale de Lyon, France.
2002-2003 M.S. pharmacology, Nice Sofia Antipolis University, France.

ADMINISTRATIVE & INSTITUTIONAL RESPONSIBILITIES

- 2018-- Director of the packaging department – IUT Evreux, University of Rouen.
2011- Member of the Advisor Commission of faculty specialists (CCSE, section 32) – University of Rouen, France.

RESEARCH INTERESTS

Surface modification, analytical chemistry, biosensors, adsorption

SCIENTIFIC ACHIEVEMENTS

Academic record (h-index: 16)

49 publications

PUBLICATIONS

1. P. Nkuigue Fotsing, E. Djoufac Woumfo, N. Mofaddel, F. Le Derf, **J. Vieillard**. « Investigation of inorganic removal by adsorption at the surface of amine modified cocoa shell sorbent», 2020 jece. (10.1016/j.jece.2020.104618)
2. S. Bekri; F. Desriac; M. Barreau; T. Clamens; T. Gallavardin; P. Le Nahenec-Martel; **J. Vieillard**; Y. Datoussaid; N. Choukchou-Braham; O. Lesouhaitier; X. Franck. « New Antibacterial Cadiolide Analogues Active Against Antibiotic Resistant Bacterial Strains. », *Bioorganic & Medicinal Chemistry Letters* (accepté)
3. L.e Cibien, M. Parot, P. Nkuigue Fotsing, P. Gaveau, E. Djoufac Woumfo, **J. Vieillard**, A. Napoli, N. Brun, « Ionothermal Carbonization in [Bmim][FeCl₄]: an Opportunity for the Valorization of Raw Lignocellulosic Agrowastes into Advanced Porous Carbons», *Green chemistry* accepté 2020
4. R. Ouargli Saker, Nabil Bouazizi, Saber Lassouad, S. Ammar, **J. Vieillard**, F. Le Derf, A. Azzouz, « Copper-loaded SBA-15 silica with improved electron mobility - Conductance and capacitance properties», *Journal of Inorganic and Organometallic Polymers and Materials*, 2020, (10.1007/s10904-020-01642-2)
5. S. Bakhta, Z. Sadaoui, U. Lassi, H. Romar, R. Kupila, **J. Vieillard**, « Performances of metals modified activated carbons for fluoride removal from aqueous solutions. », *Chem. Phys. Letters*, 754 (2020) 137705. (10.1016/j.cplett.2020.137705)
6. P. Nkuigue Fotsing, E. Djoufac Woumfo, S. Mezghich, M. Mignot, N. Mofaddel, F. Le Derf, **J. Vieillard**, « Dendrimer functionalized cocoa shell with improved nitrate and Cr(VI) removal from aqueous solution», *RSC advances* 10 (2020) 20009-20019. (10.1039/D0RA03027A)
7. M. Neaz Morshed, N. Behary, N. Bouazizi, **J. Vieillard**, J. Guan, F. Le Derf and V. Nierstrasz, « Modification of fibrous membrane for organic and pathogenic contaminants removal: From design to application. ». *RSC Advances*, 10 (2020) 13155 – 13173. (10.1039/d0ra01362e)
8. D.S.P. Franco, **J. Vieillard**, N. Paula G. Salau, G. Luiz Dotto, « Interpretations on the mechanism of In(III) adsorption onto chitosan and chitin: a mass transfer model approach. » *J. molecular liquid* 304 (2020) 112758 (10.1016/j.molliq.2020.112758)
9. N. Bouazizi, A. Abed, S. Giraud, A. El Achari, C. Campagne, M. Neaz Morshed, O. Thoumire, R. El Moznine, O. Cherkaoui, **J. Vieillard**, F. Le Derf, «Development of New Composite Fibers with Excellent UV Radiation Protection» *Physica E: Low-dimensional Systems and Nanostructures*. *Physica E* 118 (2020) 113905. (10.1016/j.physe.2019.113905)
10. P. Tsopbou Ngueagni, E. Djoufac Woumfo, P. Senthil Kumar, M. Siéwé, **J. Vieillard**, N. Brun, P. Fotsing Nkuigue, «Adsorption of Cu(II) ions by Modified Horn Core: Effect of Temperature on Adsorbent Preparation and Extended Application in River Water», *journal of molecular liquids* (IF=4.56) 298 (2020) 112023. (10.1016/j.molliq.2019.112023)
11. P. Nkuigue Fotsing, E. Djoufac Woumfo, A. Măicăneanu, **J. Vieillard**, C. Tcheka, P. Tsopbou Ngueagni, J. Mermoz Siéwé. «Elimination of Cu(II) ions from aqueous solution by a biocomposite material made from cocoa Cortex (*Theobroma cacao*) and sodium alginate»

- Environmental Science and Pollution Research, (IF=2.9) (2020) 27 (8), 8451-8466. (10.1007/s11356-019-07206-3)
12. Abed, N. Bouazizi, S. Giraud, A. El Achari, C. Campagne, O. Thoumire, R. El Moznine, O. Cherkaoui, **J. Vieillard**, A. Azzouz « Polyester-supported chitosan-Polyvinylidene fluoride-Metal oxide composites with improved flame retardancy and thermal stability», Chinese journal of Polymer science, (2020) 38, 84-91. (10.1007/s10118-020-2336-7)
 13. H. Soh Ndé, P. Azinwi Tamfuh, G. Clet, **J. Vieillard**, M. Tsaffo Mbognoua, E. Djoufac Woumfo, “Comparison of HCl and H₂SO₄ for the Acid Activation of a Cameroonian Smectite Soil Clay: Palm Oil Discolouration and Landfill Leachate Treatment» Heliyon 5 (2019) e02926 (10.1016/j.heliyon.2019.e02926)
 14. C. Soullignac, B. Cornelio , F. Brégier, F. Le Derf, J.F. Brière, T. Clamens, O. Lesouhaitier, F. Estour, **J. Vieillard**, Heterogeneous-phase Sonogashira cross-coupling reaction on COC surface for the grafting of biomolecules – application to isatin, » Colloid and surface B 181 (2019) 639-647.
 15. Abed, N. Bouazizi, S. Giraud, A. El Achari, C. Campagne, O. Thoumire, R. El Moznine, O. Cherkaoui, **J. Vieillard**, A. Azzouz, « Preparation of a novel composites based polyester nonwovens with high mechanical resistance and wash fastness properties», Colloids and Surfaces A: Physicochemical and Engineering Aspects, 577 (2019) 604-612. (10.1016/j.colsurfa.2019.05.090)
 16. M. N. Morshed, N. Bouazizi, N. Behary, **J. Vieillard**, O. Thoumire, V. Nierstrasz, A. Azzouz, “Iron-loaded amine/thiol functionalized polyester fibers with high catalytic activities: Comparative study», Dalton Transaction 48 (2019) 8384-8399. (10.1039/C9DT00937J)
 17. **J. Vieillard**, N. Bouazizi, M. N. Morshed, T. Clamens, F. Desriac, R. Bargougui, P. Thebault, O. Lesouhaitier, F. Le Derf, A. Azzouz, « CuO Nanosheets Modified with Amine and Thiol Grafting for High Catalytic and Antibacterial Activities» IECR, 58 (2019) 10179-10189. (10.1021/acs.iecr.9b00609)
 18. **J. Vieillard**, N. Bouazizi, F. Fioresi, R. Bargougui, N. Brun, P. Nkuigwe Fotsing, E. Djoufac Woumfo, O. Thoumire, H. Atmani, N. Mofaddel, F. Le Derf, « Cobalt nanoparticles embedded into polydimethylsiloxane-grafted cocoa shell: functional agrowaste for CO₂ capture » Journal of Materials Science: Materials in Electronics, 30 (2019) 3942-3951 (10.1007/s10854-019-00679-5)
 19. N. Bouazizi, A. El-Achari, C. Campagne, J. Vieillard, A. Azzouz, «Inorganic-Organic-Fabrics based Polyester/Cotton for Catalytic Reduction of 4-Nitrophenol”, Journal of Molecular Structure 1180 (2019) 1-9 (10.1016/j.molstruc.2018.11.097)
 20. N. Bouazizi, A. El-Achari, N. Behary, C. Campagne, **J. Vieillard**, O. Thoumire, A. Azzouz, « Development of new multifunctional fiber based nonwovens for organic pollutants reduction and detoxification :high catalytic and antibacterial activities », Chem. Eng. J. Volume 356, 15 January 2019, Pages 702-716; (10.1016/j.cej.2018.08.166)

21. N. Bouazizi, **J. Vieillard**, R. Bargougui, N. Couvrat, O. Thoumire, S. Morin, G. Ladam, N. Mofaddel, N. Brun, A. Azzouz, F. Le Derf., "Entrapment and Stability of Iron Nanoparticles within APTES modified Graphene Oxide Sheets with Improved Catalytic Activity", *Journal of Alloys and Compounds* 771 (2019) 1090-1102. (10.1016/j.jallcom.2018.08.240)
22. **J. Vieillard**; N. Bouazizi; R Bargougui; P Nkuigue Fotsing ; O Thoumire; G Ladam; N Brun; J-F Hochepped; E Djoufac Woumfo ; N Mofaddel; F Le Derf; A Azzouz, "Metal-Organic-Inorganic-Core-Shell as Efficient Matrices for CO₂ Adsorption: Synthesis, Properties and Kinetic Studies" ; *Journal of the Taiwan Institute of Chemical Engineer* 95 (2019) 452-465 (10.1016/j.jtice.2018.08.020)
23. J. Legros, M. Jebari; N. Bouazizi; R. Bargougui; F. Rezugui; J. Maddaluno; F. Le Derf; **J. Vieillard**, Michael addition of 1,3-dicarbonyl compounds catalyzed by iron oxide nanoparticles, *tetrahedron letters* 59 (2018), 4044-4046(10.1016/j.tetlet.2018.09.069)
24. N. Bouazizi, A. El Achari, C. Campagne, **J. Vieillard**, A. Azzouz, "Polyfunctional cotton fabrics with catalytic activity and antibacterial capacity", *Chem. Eng. J.* 351 (2018) 328-339. (10.1016/j.cej.2018.06.050)
25. N. Bouazizi, **J. Vieillard**, P. Thebault, F. Desirac, T. Clamens, R. Bargougui, N. Couvrat, O. Thoumire, N. Brun, G. Ladam, S. Morin, N. Mofaddel, O. Lesouhaitier, A. Azzouz and F. Le Derf "Silver Nanoparticles Embedded Copper Oxide as Efficient Core-Shell for Catalytic Reduction of 4-nitrophenol and Antibacterial Activity improvements", *Dalton Transaction* 47 (2018) 9143-9155
26. N. Bouazizi, A. El-achari, C. Campagne, **J. Vieillard**, A. Azzouz, Copper oxide coated polyester fabrics with enhanced catalytic properties towards the reduction of 4-nitrophenol, *Journal of Materials Science: Materials in Electronics*, 29 (2018) 10802-10813
27. **J. Vieillard**, N. Bouazizi, R. Bargougui; N. Brun; P. Nkuigue Fotsing; E. Oliviero; O. Thoumire; N. Couvrat; E. Djoufac Woumfo; G. Ladam; N. Mofaddel; A. Azzouz; F. Le Derf, « Cocoa shell-deriving hydrochar modified through aminosilane grafting and cobalt particles dispersion as potential carbon dioxide adsorbent », *Chem. Eng. J.* 342 (2018) 420-428 (10.1016/j.cej.2018.02.084)
28. N. Bouazizi, R. Bargougui, P. Thebault, T. Clamens, F. Desriac, F. Fioresi, G. Ladam, S. Morin-Grognet, N. Mofaddel, O. Lesouhaitier, F. Le Derf, J. Vieillard, Development of a novel functional core-shell-shell nanoparticles: From design to anti-bacterial applications, *J. colloid and interface science*, 513 (2018) 726-735
29. R. Bargougui, N. Bouazizi, N. Brun, P. Nkuigue Fotsing, O. Thoumire, G. Ladam, E. Djoufac Woumfo, N. Mofaddel, F. LeDerf, J. Vieillard, Improvement in CO₂ adsorption capacity of cocoa shell through functionalization with amino groups and immobilization of cobalt nanoparticles, *Journal of Environmental Chemical Engineering*, 6 (2018) 325-331, (10.1016/j.jece.2017.11.079)

30. R. Bargougui, N. Bouazizi, J.-F. Hochepped, F. Le Derf, J. Vieillard, S. Ammar “Microwave-assisted polyol synthesis of mesoporous Ta doped mixed TiO₂/SnO₂: Application for CO₂ capture”, *J. alloys and compounds*, 728 (2017) 391-399.
31. F. Fiorese, J. Vieillard, R. Bargougui, N. Bouazizi, P. Nkuigwe Fotsing, E. Djoufac Woumfo, N. Brun, N. Mofaddel, F. Le Derf, “Chemical modification of the cocoa shell surface using diazonium salts”, *J. colloid and interface science*, 494 (2017) 92-97 (10.1016/j.jcis.2017.01.069)
32. N. Bouazizi, T. Boudharaa, R. Bargougui, J. Vieillard, S. Ammare, F. Le Derf, A. Azzouz, « Synthesis and properties of ZnO-HMD@ZnO-Fe/Cu core-shell as advanced material for hydrogen storage. », *Journal of Colloid and Interface Science* 491 (2017) 89–97.
33. N. Bouazizi, S. Louhichi, R. Radhouane, J. Vieillard, F. Le Derf, A. Azzouz, “CuO-loaded SBA-15@ZnO with improved electrical properties and affinity towards hydrogen.”, *Applied Surface Science*, Volume 404 (2017) 146-153
34. T. Clamens, T. Rosay, A. Crépin, T. Grandjean, T. Kentache, J. Hardouin, P. Bortolotti, A. Neidig, Ma. Mooij, M. Hillion, J. Vieillard, P. Cosette, J. Overhage, F. O’Gara, E. Bouffartigues, A. Dufour, S. Chevalier, B. Guery, P. Cornelis, M. G. J. Feuilloy, O. Lesouhaitier, « The aliphatic amidase AmiE is involved in regulation of *Pseudomonas aeruginosa* virulence », *Scientific reports* 7 (2017) (10.1038/srep41178)
35. N. Bouazizi, R. Bargougui, A. Benghnia, J. Vieillard, S. Ammar, A. Azzouz, “Synthesis of tin oxide activated by DAN grafting and Mo nanoparticles insertion for optoelectronics properties improvements. », *RSC Advances*, 2016, 6, 95405–95416, (10.1039/C6RA21017A)
36. Julien Vieillard, Marie Hubert-Roux, Florian Brisset, Cecile Soullignac, Flavia Fiorese, Nadine Mofaddel, Sandrine Morin-Grognet, Carlos Afonso, and Franck Le Derf, « Atmospheric Solid Analysis Probe-Ion Mobility Mass Spectrometry: An Original Approach to Characterize Grafting on Cyclic Olefin Copolymer Surfaces. », *Langmuir* 31 (2015) 31,13138–13144; (10.1021/acs.langmuir.5b03494)
37. Thibaut Rosay, Alexis Bazire, Suraya Diaz, Thomas Clamens, Anne-Sophie Blier, Lily Mijouin, Brice Hoffmann, Jacques-Aurélien Sergent, Emeline Bouffartigues, Wilfrid Boireau, Julien Vieillard, Christian Hulen, Alain Dufour, Nicholas J. Harmer, Marc G. J. Feuilloy, Olivier Lesouhaitier, « *Pseudomonas aeruginosa* Expresses a Functional Human Natriuretic Peptide Receptor Ortholog: Involvement in Biofilm Formation », *MBio* 6 (2015) e01033-15.
38. Florian Brisset, Julien Vieillard, Benjamin Berton, Sandrine Morin-Grognet, Cécile Duclairoir-Poc, Franck Le Derf, « Surface functionalization of cyclic olefin copolymer with aryldiazonium salts: A covalent grafting method », *Applied Surface Science* 329 (2015) 337-346. (10.1016/j.apsusc.2014.12.060)
39. Nikola Stempel, Anke Neidig, Michael Nusser, Robert Geffers, Julien Vieillard, Olivier Lesouhaitier, Gerald Brenner-Weiss, Joerg Overhage, « Human Host Defense Peptide LL-37 Stimulates Virulence Factor Production and Adaptive Resistance in *Pseudomonas aeruginosa*.”, *Plos One*, 8 (2013) e82240.

40. A.Dagorn, M.Hillion, A.Chapalain, O.Lesouhaitier, C.Duclairoir Poc, J.Vieillard, S. Chevalier, L.Taupin, F.Le Derf and M.G.J. Feuilloley, « Gamma-aminobutyric acid acts as a specific virulence regulator in *Pseudomonas aeruginosa* », *Microbiology* 159 (2013) 339-351. (10.1099/mic.0.061267-0)
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42. A.S.Blier, J.Vieillard, E.Gerault, A.Dagorn, T.Varacavoudin, F.Le Derf, N.Orange, M.Feuilloley, O.Lesouhaitier, « Quantification of *Pseudomonas Aeruginosa* hydrogen cyanide production by a polarographic approach », *Journal of Microbiological Methods*, 90 (2012) 20-24
43. A.S.Blier, W. Veron, A.Bazire, E.Gerault, L.Taupin, J.Vieillard, K.Rehel, A.Dufour, F.Le Derf, N.Orange, C.Hulen, M.G. J.Feuilloley, O.Lesouhaitier, « C-type natriuretic peptide modulates quorum sensing molecule and toxin production in *Pseudomonas aeruginosa*. », *Microbiology*, 157 (2011) 1929–1944.
44. E.Bou Chakra, B.Hannes, J.Vieillard, C.D.Mansfield, R.Mazurczyk, A. Bouchard, J. Potempa, S.Krawczyk, M.Cabrera, « Grafting of antibodies inside integrated microfluidic–microoptic devices by means of automated microcontact printing », *Sensors and Actuators B: Chemical*, 140 (2009) 278-286.
45. J.Vieillard, R.Mazurczyk, L.L.Boum, A.Bouchard, Y.Chevolot, P.Cremillieu, B.Hannes, S.Krawczyk, « Integrated microfluidic-microoptical detection systems fabricated by dry etching of soda-lime glass », *Microelectronic Engineering*, 85 (2008) 465-469
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47. J.Vieillard, R.Mazurczyk, C.Morin, B.Hannes, Y.Chevolot, P.L.Desbène, S.Krawczyk, « Application of microfluidic chip with integrated optics for electrophoretic separations of proteins », *Journal of Chromatography B*, 845 (2007) 218-225.
48. S.Krawczyk, R.Mazurczyk, A.Bouchard, J.Vieillard, B.Hannes, « Towards medical diagnostic chips with monolithically integrated optics in glass substrates », *Physica Status Solidi C*, 4 (2007) 1581-1584.
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