

Job title	Post-Doc Geomicrobiology of Modern and Ancient Microbialites
Ref	2018-14- MICROBIALITES
Job type (PhD, Post-doc, Engineer)	Post-Doc
Contract duration (months)	24 months
Qualifications (Master degree, PhD...)	PhD
Job hours (full time/ part time)	Full time
Employer	UBFC – Université de Franche-Comté
Host Laboratory	Biogeosciences, Unité mixte CNRS/UB 6282 The BIOGEOSCIENCES laboratory is a Mixed Research Unit (UMR) composed of about a hundred people whose employers are the University of Burgundy, the National Center for Scientific Research (CNRS), the Ecole Pratique des Hautes Etudes (EPHE) and AgroSup Dijon.
URL Host Laboratory	http://biogeosciences.u-bourgogne.fr/fr/recherche/collaborations-inter-equipes https://marinesciences.uconn.edu/faculty
Address Host Laboratory	UMR CNRS/uB 6282 Biogéosciences - Université de Bourgogne, 6 bv Gabrile, 21000 Dijon
Job description	<p>A 2-year post-doc position is available in the field of geochemistry, sedimentology and geomicrobiology. The project addresses the role of microbial processes in formation of biological sediments and their evidence (i.e., biominerals) in the fossil record.</p> <p>A background in geomicrobiology/geochemistry with a specialty in microbe-mineral interactions, carbonate mineralogy, stable isotopes geochemistry (preferably of C, N, S, Fe) and/or microbial ecophysiology is desired.</p> <p>The project addresses the role of microbial processes in formation of biological sediments and their evidence (i.e., biominerals) in the fossil record. We seek to link microbial interactions in modern microbialite systems (lithifying microbial mats) with carbonate mineral precipitation and mineral morphology, fabric alteration during post-depositional alteration (early diagenesis) and preservation of geochemical (e.g., isotopic) signatures in deep time. The research encompasses microbial organosedimentary ecosystems, both unlithified and lithified, in continental aquatic systems (ranging from freshwater to hypersaline lakes, lagoons and rivers) as well as in open marine ecosystems and focuses on extrinsic and intrinsic constraints of microbialite development, including water chemistry, climate, tectonics, geological context, microbial composition, metabolic activity and interactions as well as organic matrix properties. Laboratory experimentation (with intact systems and microbial isolates) will focus on the specific role of physicochemical conditions (e.g., T°, pCO₂, pH, [Ca²⁺], [Mg²⁺], light quality) on the</p>

	<p>extent, rate, efficiency and ultimately the mechanisms of microbialite growth. Our approach includes investigation of the organic (e.g., exopolymeric substance) and inorganic composition of microbialites, notably isotopic signatures, as well as of mineral morphology, microbialite fabric, characterization of the depositional environments (from macro- to nano-scale) and microbial characteristics. The project involves fieldwork and sample analyses (e.g., using IRMS, NANO-SIMS, XRD, scanning electron, confocal laser, Raman and cathodoluminescence microscopy), laboratory experimentation as well as geochemical modeling (e.g., Geochemist Workbench; FREEQC).</p>
Supervisor(s)	<p>Pieter Visscher (pieter.visscher@uconn.edu) and Emmanuelle Vennin (Emmanuelle.vennin@u-bourgogne.fr)</p>
Candidate profile	<p>sedimentologists, geochemists, and microbiologists</p> <p>We seek to fill a post-doctoral position for a period of two years. The successful candidate should have a background in geomicrobiology/geochemistry with a specialty in microbe-mineral interactions, carbonate mineralogy, stable isotopes geochemistry (preferably of C, N, S, Fe) and/or microbial ecophysiology. The successful candidate will work in a team of sedimentologists, geochemists, and microbiologists on aspects of biomineralization (mineral precipitation in an organic matrix), early diagenetic alteration of the organosedimentary structures, diagenetic processes and isotopic biosignatures in fossil microbialites and the relation with depositional environments.</p> <p>The successful candidate should have relevant research experience and a strong publication record in an appropriate field (e.g., geochemistry, geomicrobiology, sedimentology), able to work independently but also in a team setting. Excellent written and verbal communication skills in French and proficiency in English are required.</p> <p>UBFC is an equal opportunity employer and encourages members of underrepresented groups to apply.</p> <p>For further information, please contact Emmanuelle Vennin (Pr UBFC-Emmanuelle.vennin@u-bourgogne.fr) and Pieter Visscher (U. Connecticut-pieter.visscher@uconn.edu).</p>
Keywords	<p>Microbialites, microbial mats, biogeochemistry, microbiology, mineralogy</p>
Application deadline	<p>June 30th, 2018</p>
Starting Job	<p>September 3, 2018</p>



Application	<p>Post-doc position</p> <p>Please send the following documents (all in one PDF file) by e-mail to job-application@ubfc.fr:</p> <ol style="list-style-type: none">1) For EU candidates: Copy of your national ID card or of your passport page where your photo is printed. For non-EU candidates: Copy of your passport page where your photo is printed.2) Curriculum Vitae (may include hyperlinks to your ResearchID, Research Gate Google Scholar accounts).3) Detailed list of publications (may include hyperlinks to DOI of publications).4) Letter of motivation relatively to the position (Cover Letter) in which applicants describe themselves and their contributions to previous research projects (maximum 2 pages)5) Copy of your PhD degree if already available.
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