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Microbial Films-the Interplay of Physics and Biology

Guest Editor:

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Deadline for manuscript submissions: closed (31 January 2022)

Message from the Guest Editor

Authors are invited to submit their experimental modelling/simulation and theoretical work focused on the physics of biofilms and its interaction with biological aspects, such as: (i) biofilm mechanical properties and their relation to microbial attachment, growth and matrix maturation; (ii) effects of the physics of the environment on biofilm development (interactions with suspended particles, impact of air/gas-liquid flows, hydrodynamic patterns/shear stress, temperature, etc.); (iii) experimental methodologies to assess/interpret biofilm behaviour based on the measurement of physical parameters (rheology, porosity, density, tortuosity, ...); (iv) physical methods for online monitoring of biofilm development at lab and industrial scale, diffusion-mass transfer around and inside biofilms; (v) nanostructured surfaces/topographies and microbial adhesion. Other topics are welcome provided they keep the focus on physical approaches and their impact on biofilm metabolism, structure and spatial distribution of biofilm components.









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Editor-in-Chief

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Message from the Editor-in-Chief

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