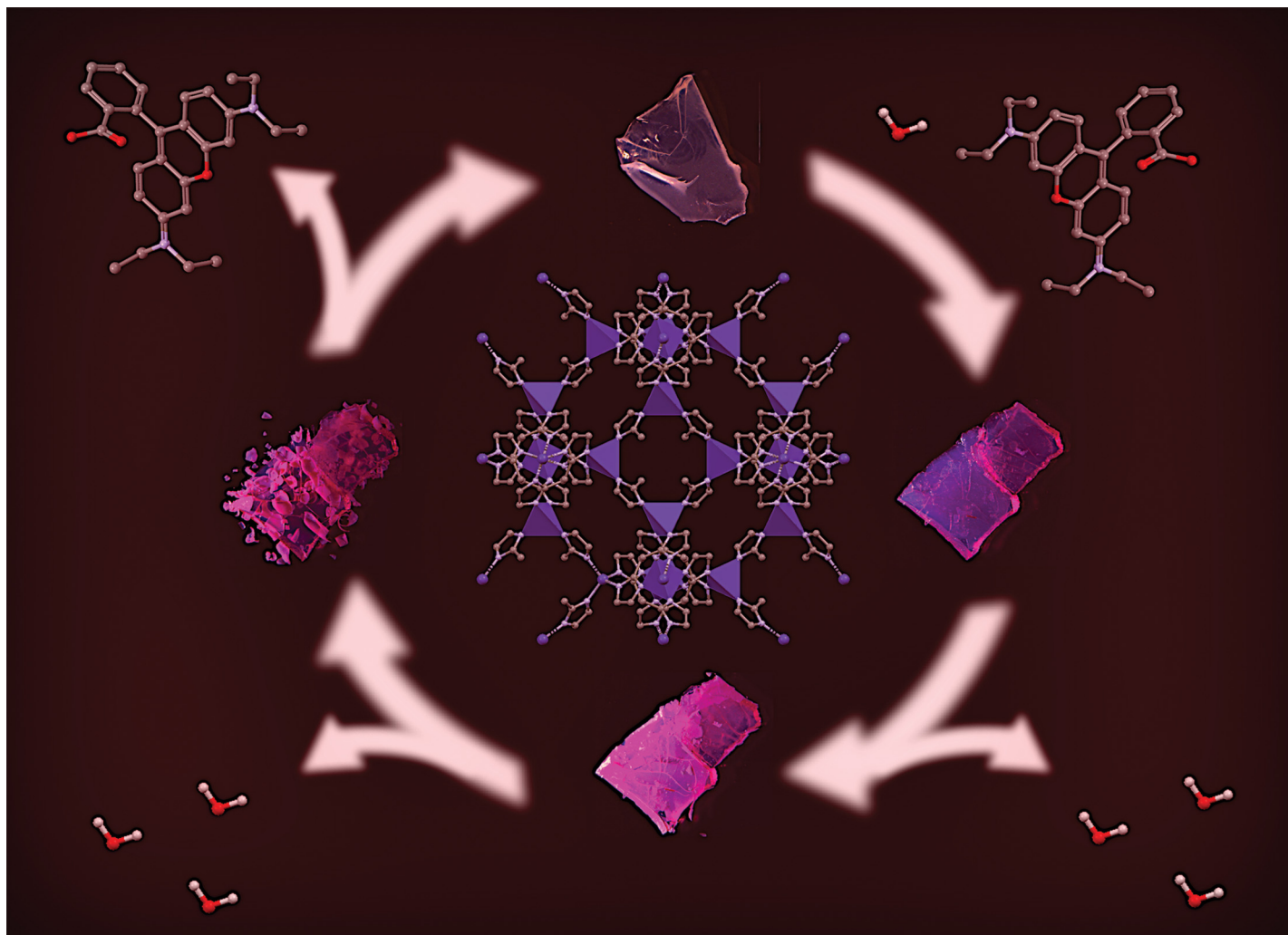




**Showcasing research from Dr Jose de Jesus Velazquez-Garcia and collaborators, FS-SCS, Deutsches Elektronen-Synchrotron DESY, Hamburg, Germany.**

**Size matters: limitations of the ZIF-8 monolith and its Ni-, Co- and Cu-doped variants for the adsorption of rhodamine B**

Despite its known instability in water, ZIF-8 is still used for water purification, including the adsorption of molecules significantly larger than its pore window. Here, we demonstrate that monolithic ZIF-8 and its Ni-, Co- and Cu-doped variants fail as adsorbents for rhodamine B – showing poor uptake (far below micro/nanoparticle performance) while degrading in water. The water instability causes desorption and post-drying peeling of the monoliths. This confirms that ZIF-8 monoliths are neither stable nor effective for adsorption of large molecules. These results question the suitability of ZIF-8 for water purification.

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**As featured in:**



See Jose de Jesus Velazquez-Garcia *et al.*, *Mater. Adv.*, 2025, **6**, 7800.