

Recent progress on processability of imine-based covalent organic frameworks

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Covalent organic-frameworks (COFs) are an emerging class of porous and ordered materials formed by condensation reactions of organic molecules. Recently, the Schiff-base chemistry or dynamic imine-chemistry has been explored for the synthesis of new COFs. The main reason of this tendency is higher chemical stability, porosity and crystallinity that they show in comparison to those previously reported, e.g. boronate ester-based COFs.¹ In this talk I will revise some interesting aspects concerning the synthesis of imine-based COFs that enable their processability using several techniques such as ink-jet printing,² soft-lithography,² microfluidic,³ spray drying,⁴ 3D-

printing, as well as the formation of new large membranes and functional composites.⁵ Perspectives on potential applications of these materials will be presented.⁶

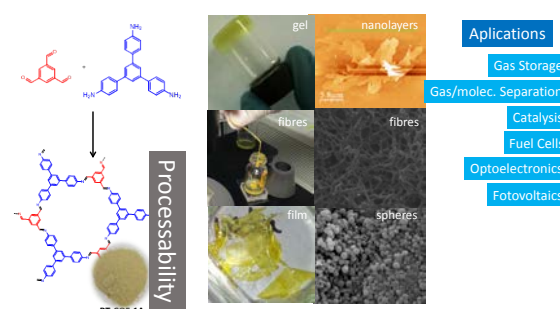


Figure 1. Scheme summarizing the talk.

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