

## Microsymposium

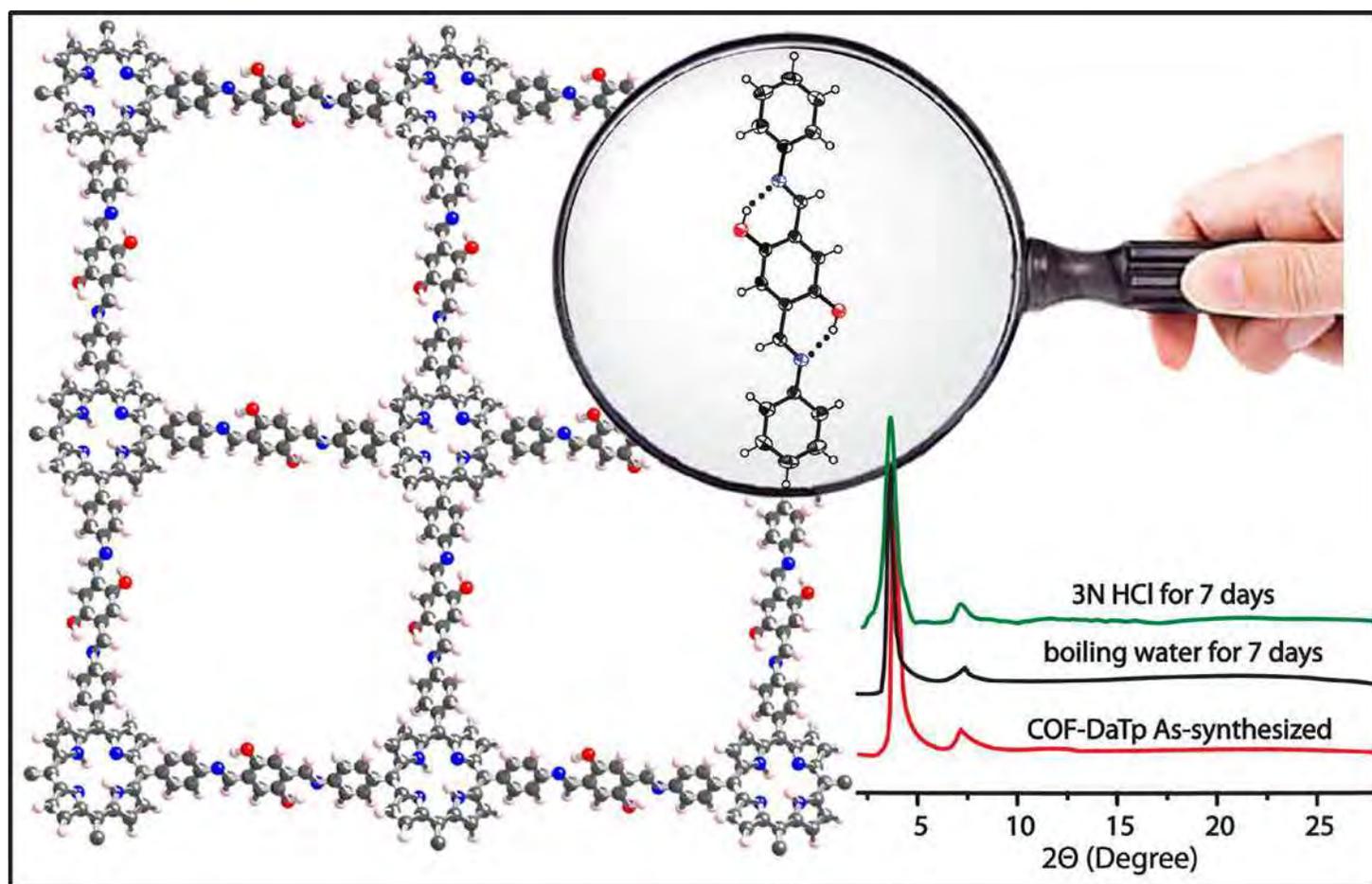
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### *Intra-molecular Interactions in Porous Covalent Organic Frameworks*

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A new strategy of intramolecular hydrogen bonding in 2D covalent organic framework as an extra stabilizing factor has been introduced, which helps to improve the crystallinity, porosity and chemical stability of the COF. Using this concept, highly stable porphyrin containing covalent organic frameworks have been synthesized using the Schiff base reaction. The stability of the COFs mainly arises due to the strong intramolecular O-H...N=C hydrogen bonding. Validation of this postulate was cross-checked by synthesizing methoxy (OCH<sub>3</sub>) substituted COF in which no hydrogen bonding exists. It was found that methoxy substituted COF have a low crystallinity, porosity and chemical stability as compared to hydrogen bonded COF.



**Keywords:** covalent organic frameworks, hydrogen bonds, mesoporous material