

Probing the adsorption Characteristic of MOFs by QCM for volatile organic Compounds

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Adsorption is a well-established and effective technique for the removal and recovery of VOCs from polluted air. Porous adsorbents are the key part of this technique. In the past years some conventional adsorbents such as activated carbon, zeolite, resins, silica gels were usually applied to capture VOCs. Recently, an intriguing family of metal organic frameworks (MOFs) has attracted increasing attention due to their extra high surface area and pore volume. This study describes synthesis, characterization and sensing application of different MOFs. In this study different MOFs to used adsorb volatile organic solvents such as benzene, toluene and chlorobenzene by using Quartz Crystal Microbalances. MOFs were taken due to its high surface area, chemical and thermal stability.