

308g Characterization of Metal-Organic Framework as Novel Adsorbent

Zheng Ni, Richard I. Masel, Keith Cadwallader, Mark Shannon, and John Jerrell

Metal Organic Framework (MOF), a porous materials based on molecular open structure, has shown its unique advantages in adsorption and separation when compared with conventional zeolites and carbon based adsorbent. In this work, we tested less than 0.1mg of MOF-5 as adsorbent in a standard purge and trap micro system. We demonstrated gains over 4000 when it exposed in a stream containing 5×10^{-4} torr of dimethyl methylphosphonate (DMMP), a standard sarin simulant. It also shows selectivity to adsorbates with different polarities.