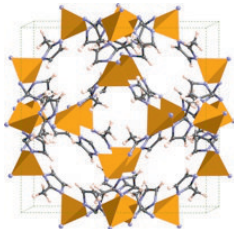
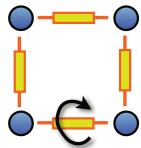
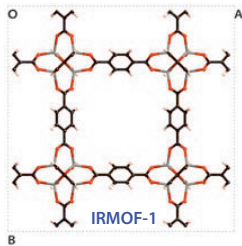


intraframework dynamics

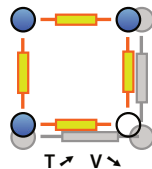


ZIF-8

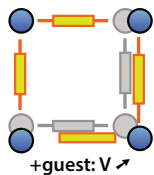


IRMOF-1

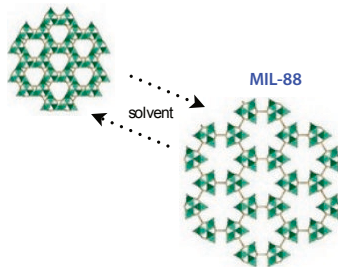
negative thermal expansion



swelling

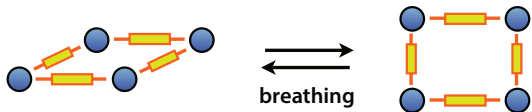
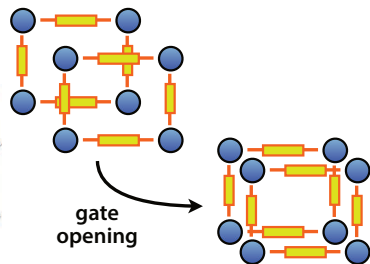
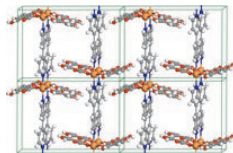


+guest: V ↑

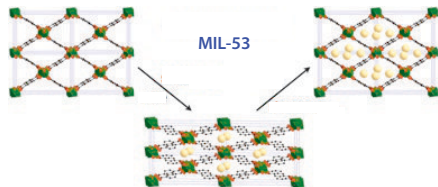


MIL-88

Cu(4,4'-bipy)(dhbc)₂



breathing



MIL-53