

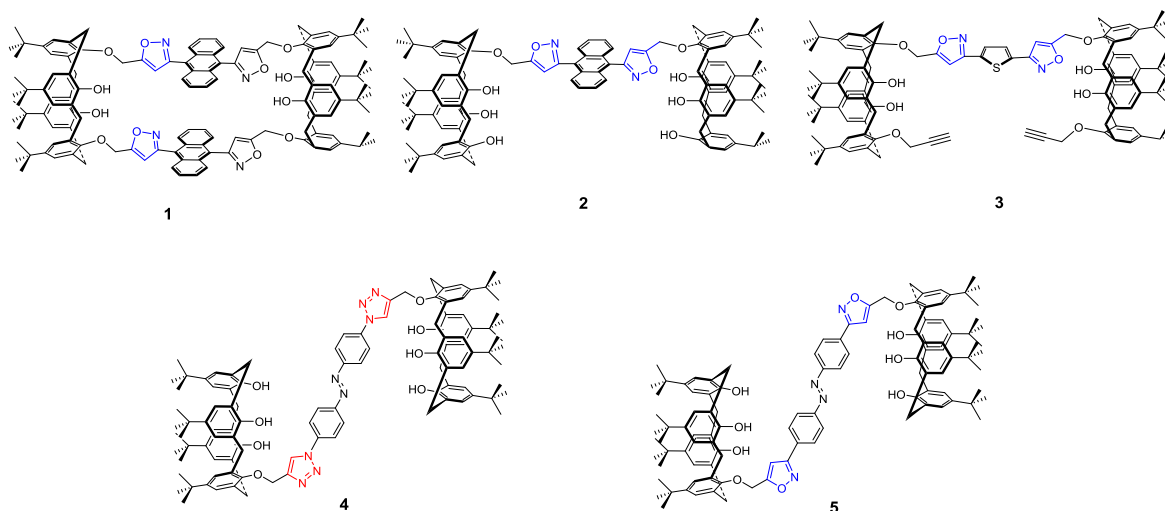
## Synthesis of Biscalix[4]arenes and Their Applications in Molecular Sensing and Organogel Materials

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Supramolecular gels derived from low molecular weight compounds are formed through self-assembly of multiple non-covalent interactions such as hydrogen bonding,  $\pi$ - $\pi$  stacking, dipole-dipole interactions, metal-ligand coordination, van der Waals force, and solute-solvent interactions. We shall report our works on the synthesis of a rectangular biscalix[4]arene **1**<sup>1</sup> and a biscalix[4]arene gelator **2**,<sup>2</sup> which do not contain any long alkyl chains and yet exhibiting morphology with either nano- or microspheres with fluorescent properties. Furthermore, phase selective gelation of biscalix[4]arene **3** shows great potential in oil spill recovery.<sup>3</sup> By introducing azobenzene as a photo-responsive group, we also synthesized two azobenzene bridged biscalix[4]arene derivatives (**4** and **5**) which contain either triazolyl or isoxazolyl groups as linking units. We are happy to see that the morphology of the spherical aggregates of **4** could be tuned by UV-visible irradiation.<sup>4,5</sup>



### References:

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