MS31-P15 | Separation of Isomers by Host-Guest Chemistry: polymorphism, resolutions and templating.

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Separation by enclathration is a useful technique when the compounds to be separated have similar physico-chemical properties, as often occurs with isomers. The Werner host $Ni(NCS)_2(4\text{-phenylpyridine})_4$ has been employed to separate 1- and 2- methylnaphthalenes. The crystals formed from a methanol-solution change colour from purple to blue, with a concomitant change to a new polymorph. The kinetics of this process have been studied. A second study deals with the separation of methylcyclohexanones with the chiral host deoxycholic acid. Competition experiments between 2-methyl- and 3-methyl- cyclohexanones result in (S)-2-methylcyclohexanone predominating and acting as a template throughout the selectivity profile of the 2-methyl- and 3-methyl(rac)-cyclohexanones.