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Multigelator organogels-mixture of gelators assembled by different driving forces

In this study, an organogel composed of two low molecular weight gelators with distinct structures has been studied. One of the gelators is the derivative of anthracene with fluorescence, the other is based on glutamic acid. The gelation process and the structure of the self-assembled fibres have been studied with optical microscopes, differential scanning calorimeter (DSC), and rheometer. The two gelators form gel in dimethyl sulfoxide (DMSO) individually, meanwhile the composite gels exhibit unique feature both in structure and in properties. With NMR spectroscopy and FTIR, the interaction between the molecules has been investigated in detail. All the results show that the two gelators self-sort during the gelation. The great contrast in structure of the two gelators demonstrated that their self-assemble was bonded by different intermolecular forces.

Primary author(s): Dr CHEN, Jingyu (Deakin Univ, Geelong, Australia, Institute of Frontier Materials)

Co-author(s): Dr LI, Jingliang (Deakin University)

Presenter(s): Dr CHEN, Jingyu (Deakin Univ, Geelong, Australia, Institute of Frontier Materials)