Institut Européen de Chimie et Biologie

I E C B

Development of Functional Molecules Bearing Oligo(ethylene glycol)s as Thermoresponsive Units.

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We have been involved in development of functional molecules composed of mono-disperse oligo(ethylene oxide) (OEG) skeletons. Oligo(ethylene oxide)s are known to undergo conformational transformation in response to the temperature change, and such property has been successfully applied for promoting phase transitions in various media. In fact, we have attained 1) thermal single-crystal to single-crystal transformation of cyclic OEG derivatives, 2) thermal transition of liquid crystalline phases coupled with the conformational change of cyclic OEG derivatives, and 3) thermally induced phase separation of oligo(ethylene oxide)s bearing aromatic groups from aqueous solutions.