

Abstract Submitted  
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**Origin of cononsolvency,  
based on the structure of tetrahydrofuran–water mixture** CHARLES HAN,  
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ICCAS, Beijing, China — Poly (*N*-isopropylacrylamide) (PNIPAM) is soluble in  
(cold) water and THF, but insoluble in mixtures of the two in certain conditions.  
The origin of this cononsolvency phenomenon was studied from the point of view of  
mixed solvent structures. Dynamic light scattering, small angle neutron scattering,  
and viscometry were used to study this phenomenon. From this study, the dynamic  
equilibrium of THF-water compositional fluctuations in the mixed solvent system  
was found to be the main cause for this cononsolvency effect.

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