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Cyclodextrin-templated Fluorescent Anisotropic Structure JONG SEUNG PARK, JAMES N. WILSON, UWE H.F. BUNZ, MOHAN SRINIVASARAO, School of Polymer, Textile and Fiber Engineering, School of Chemistry and Biochemistry, Center for Advanced Research in Optical Microscopy (CAROM), GEORGIA INSTITUTE OF TECHNOLOGY TEAM — $\gamma-$Cyclodextrin (γ-CD) consisting of eight glucose units has a large cavity with diameters of 9.5 Å. This large cavity size allows the inclusion of molecules and the proximity of the molecules can lead to electronic interaction among them. In this presentation, we describe the complex formation of linear and planar molecule acetylene dye with γ-CD. When mixed with γ-CD in high enough concentrations, the dye with CD forms a liquid that is anisotropic in nature, as evidenced by observations using a polarized light microscope. Fluorescent properties of these complexes were examined to probe the nature of the complex formed in aqueous solutions. Wide angle X-ray scattering (WAXD) and differential scanning calorimetry (DSC) were also used to characterize the complex formed.

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