A FLUORINE-CONTAINING HYDROPHOBICALLY ASSOCIATING POLYMER SYNTHESIS AND SOLUTION PROPERTIES OF COPOLYMERS OF ACRYLAMIDE AND FLUORINE-CONTAINING ACRYLATES OR METHACRYLATES

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Fluorine-containing hydrophobically associating polymers have been synthesized by copolymerization of acrylamide with a small amount of an acrylate or methacrylate having a fluorocarbon containing ester group. It was found that hydrophobic associations occurring between these fluorocarbon chains was stronger than the interactions of the corresponding hydrocarbon comonomers and depends on the length of the fluorocarbon chain. The rheological properties of the copolymer solutions were studied. The solutions were found to be highly pseudoplastic but the viscosity loss was completely reversible upon removal of shear Evidence for hydrophobic association of the fluorocarbon groups was obtained by the dependence of the Brookfield viscosity on temperature.the addition of NaCl and the addition of organic solvents urea and surfactants.

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