

Study of hybrid nano-promoters for sulfur hexafluoride hydrate formation

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Gas hydrates have been widely studied in the past decades because of their great potential gas storage, capture, and the others. Such gas hydrates are nonstoichiometric solid compounds of a polyhedral structure which consist of water molecules and interstitially encaging gas component molecules. One of the gases, sulfur hexafluoride (SF₆) has been used as insulating gas in electrical transformers, cleaning gas in industrial fabrication of semiconductors. In this study, we studied a new promotional system in synergy influence from mixtures of organic surfactant and solid stated copper nanopowder as hybrid nanopromoter in not yet reported on kinetic formation of SF₆ hydrates.