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Synthesis and Characterization of Polypyrrole Coated Latex Particles by Admicellar Polymerization SIRINYA CHANTARAK, RATHANAWAN MAGARAPHAN, The Petroleum and Petrochemical College, Chulalongkorn University — Polypyrrole (PPy) is good electrical conductive polymer, however, it is poor processibility and its flexibility is limited. To overcome these limitations, natural rubber which is high elongation at break is used by using admicellar polymerization technique. In this research, anionic surfactant; sodium dodecylsulfate (SDS) is used as a reaction template. NaCl is added to decrease electrostatic repulsion between headgroups of surfactants. The polymerization is initiated by iron (III) sulfate at 5^oC. Thermogravimetric analysis results of admicelled rubbers showed the curves likely to rubber curve with the major decomposition at 349^oC which revealed the right shift of degradation temperature of PPy by admicellar polymerization. The FT-IR analysis indicated successful coating of PPy on the surface of the rubber particles. The conductivity of admicelled rubber films was measured by two-point probe meter. The higher concentration of monomer and the lower the initiator added showed the higher conductivity.

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