

# Chemical Engineering: From Materials Engineering to Nanotechnology

April 04-05, 2018 | Miami, USA

## Synthesis and characterization of emulsion polymerized polyaniline doped with DBSA

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In this paper polyaniline (PANI) has been made through polymerization of aniline using emulsion polymerization technique. The polymerization is carried out in an emulsion comprising water and a non-polar or weakly polar organic solvent (Xylene) in the presence of the functionalized protonic acid dodecyl benzene sulphonic acid (DBSA). It is found that using the emulsion polymerization technique, conducting PANI-DBSA complexes can be produced that exhibit high molecular weight, good conductivity and high solubility in organic solvents in the electrically conducting

state. Electrically conducting polyaniline PANI-DBSA prepared by an inverted emulsion polymerization in which DBSA played both roles of surfactant and dopant. Fourier transform infrared FTIR. spectroscopy for the PANI-DBSA showed the existence of hydrogen bonding between PANI and DBSA which indicates the existence of PANI. UVV is spectra was performed to check the doping level of DBSA. The electrical conductivity measurement, TGA test and measurement of viscosity was also studied in the paper.

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