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## Surface Morphological Analysis of Differently Sulphonated Styrene -1, 6-Hexanediol Diacrylate Copolymer as Novel Cation Exchange Resin and as a Catalyst Support

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**Abstract :** This work describes the surface morphological analysis of differently sulphonated styrene -1, 6-hexanediol diacrylate copolymer. The copolymer beads were synthesised by suspension copolymerisation. It was chemically modified by sulphonating the polymer using con. Sulphuric acid. The differently sulphonated copolymer beads were obtained by varying the sulphonation reaction time. The sulphur content in the sample was first analysed by CHNS analysis. The sulphonic acid group attachment into the copolymer network was verified by infrared spectroscopy (FTIR). Ion-exchange capacity value of the sulphonated polymer was determined by salt splitting titration using standardised NaOH. The surface morphology of the copolymer beads were done by scanning electron microscopy analysis.

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