

## عنوان مقاله:

Investigation into the effect of carboxylic acid monomer type on the particle nucleation in the emulsifier- free emulsion copolymerization of styrene and butadiene

## محل انتشار:

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## خلاصه مقاله:

Carboxylated styrene- butadiene rubber (XSBR) latexes were prepared by emulsifier- free emulsion copolymerization of styrene and butadiene with various carboxylic acid monomers. The effect of various carboxylic acid monomers on the particle formation process was investigated. It was observed that the type of carboxylic acid monomer strongly affected the particle nucleation. Number of particles and thus polymerization rate increased with increasing hydrophobicity of carboxylic acid monomers. There was significant difference in the polymerization rate per particle. Results showed that particle nucleation and growth are dependent on the hydrophilic nature of carboxylic acid monomers. Average particle diameter of XSBR latexes in the dry state was obtained through some calculations from the direct measurement of average particle diameter in the monomer- swollen state by dynamic light scattering technique. Several parameters such as polymerization rate, number of latex particles per unit volume of the aqueous .phase and polymerization rate per particle were calculated

## کلمات کلیدی:

XSBR latex; Emulsifier- free emulsion copolymerization; particle nucleation

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/42516>

