

# Turkish Journal of Chemistry

Turkish Journal


of

Chemistry

A Facile Method for the Preparation of Poly(4-vinylpyridine) Nanoparticles and their Characterization

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**Abstract:** Submicron size particles were synthesized from 4-vinylpyridine (4-VP) using an oil-in-water emulsion system. Divinyl benzene (DVB) and ethylene glycol dimethacrylate (EGDMA) were utilized as crosslinkers for the synthesis of p(4-VP) hydrogel nanoparticles in sodium dodecyl sulfate (SDS) surfactant systems. Characterization of the particles was made by transmission electron microscopy (TEM) and dynamic light scattering (DLS) methods. To render a positive charge, p(4-VP) particles were reacted with 1-bromo butane (1-BB).

**Key Words:** Microgel, nanogel, nanoparticles, nanotechnology, core-shell structure, biomaterials, bactericidal, antibiotic polymers

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Turk. J. Chem., **33**, (2009), 23-31.

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