

## Synthesis of spherical TS-1 materials using an anion exchange resin as a macrotemplate

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**Abstract:** for several recent years, syntheses of spherical zeolitic materials, such as S-1, ZSM-5 and Beta, have been reported using an anion exchange resin as macro-templates. Conceptually, these syntheses are based on the use of a colloidal crystal templating process. The advantage of this method is preparation of pure self-bonded zeolite micro/macrostructures.

In this paper the synthesis of TS-1 is reported using the colloidal crystal templating process. The organic template was TPAOH and the resin (IRA900 Cl) was used as a macrotemplate. Techniques such as X-ray powder diffraction (XRD), infrared spectroscopy (IR) and optical microscope, were used to characterize synthesized samples.

**Keywords:** *Macrostructure, Macrotemplate, Colloidal crystal templating Process, Titanium Silicalite-1.*