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Zeolite Aggregate

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ZEOLITE AGGREGATE

A Major Qualifying Project Report

Submitted to the Faculty and Staff of

WORCESTER POLYTECHNIC INSTITUTE

for requirements to achieve the

Degree of Bachelor of Science

in Chemical Engineering

by

Derek Pszybysz

Date: April 11, 2008

Approved:

Professor Thompson of the
Chemical Engineering Department

Abstract:

My MQP is attempting synthesizing of the ZSM-5 zeolite into larger sizes compared to past work which have synthesized these on the size of fine sand. The synthesis procedure uses tetrapropyl ammonium bromide (TPABr) and sodium hydroxide NaOH with silica beads to try and recreate the ZSM-5. The synthesis runs use the comparison of higher TPABr: NaOH ratios as well as the effects of calcining the samples and not having the samples calcined. Scanning electron microscope was used for analysis.

