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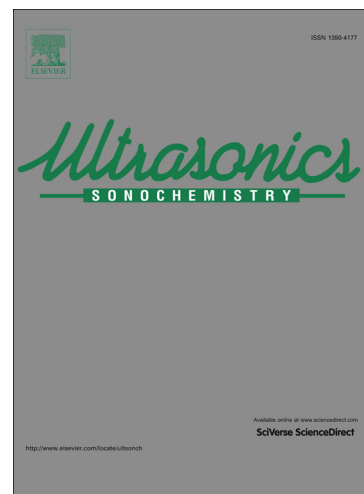
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Intensification of heterogeneously catalyzed Suzuki-Miyaura cross-coupling reaction using ultrasound: Understanding effect of operating parameters

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Abstract:

Palladium-catalyzed Suzuki-Miyaura cross-coupling reaction is a significant reaction for obtaining industrially important products with carbon-carbon bonds. The current research work deals with intensification of reaction of 4-bromoanisole and phenylboronic acid catalyzed with 5 wt. % Pd/C (5 % by weight Pd supported on C available as commercial catalyst) using ultrasound and more importantly, without use of any phase transfer catalyst. Heterogeneous catalyst has been selected in the present work so as to harness the benefits of easy separation and the possible limitations of heterogeneous operation are nullified by introducing ultrasonic irradiations. The effect of operating parameters such as ultrasound power, temperature, catalyst

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