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Mechanochemistry and Its Application in Supramolecular Synthesis

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Mechanochemistry and Its Application in Supramolecular Synthesis

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Mechanochemistry is a well-established technique used for solid-state supramolecular and covalent chemical synthesis induced by the input of mechanical energy.¹ In general the mechanical energy can be promoted by either hand grinding/ manual grinding or mechanical milling. No added solvents or minimal amount of solvent used during grinding made mechanochemistry a greener alternative to the solution mediated chemical synthesis. The method has been extensively used to synthesize materials such as cocrystals, salts, pharmaceutical solids, discrete metal complexes, metal organic frameworks, and zeolitic imidazolate frameworks. Mechanochemistry has been also applied to organic synthesis including C–C, C–O, C–N bond formation reactions, synthesis of heterogeneous catalysts, and porous organic polymers etc. Here in this talk I will discuss about various functional materials prepared in our laboratory using mechanochemistry and their application in Crystal Engineering.²

Reference

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