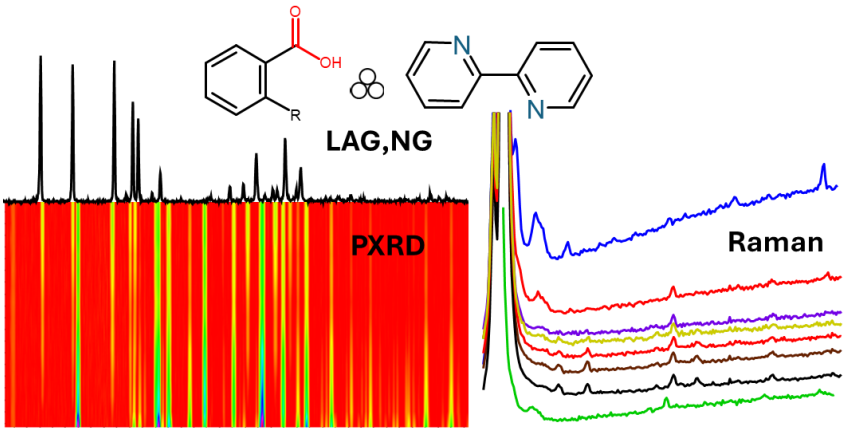
Role of liquid in cocrystallization of 2,2'-bipyridine with salicylic and anthranilic acid

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Mechanochemistry is an ever-developing field in green chemistry that promotes and/or accelerates chemical reactions by applying mechanical force via hand grinding, ball-milling, resonant acoustic mixing, extrusion, sonication, etc. Mechanochemical reactions are usually carried out under solvent-free conditions or in the presence of a small amount of liquid additive. [1] In liquid-assisted (LAG) mechanochemical reactions, small amounts of liquid play a complex, system-dependent role that remains unclarified. Even in these amounts, they influence reaction kinetics, selectivity, and mechanisms by enhancing molecular mobility at particle interfaces. Furthermore, they can serve as promoters, inhibitors, or structure-directing agents.[2] As previously reported, depending on the solvent's polarity, proticity, and hydrogen-bonding ability, as well as the chemical properties of the reactants, cocrystallization can yield different products.[3,4] Herein, we present the cocrystallization of 2,2'-bipyridine with salicylic and anthranilic acid via ball-milling. Specifically, we examined how the choice of the liquid influences the outcome of cocrystallization through in situ techniques, including Raman spectroscopy and powder X-ray diffraction (PXRD).



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