

1 **Supporting Information**
2 **Hygroscopic Growth and Phase Transitions of Na₂CO₃ and Mixed**
3 **Na₂CO₃/Li₂CO₃ Particles: Influence of Li₂CO₃ on Phase Transitions**
4 **of Na₂CO₃ and Formation of LiNaCO₃**

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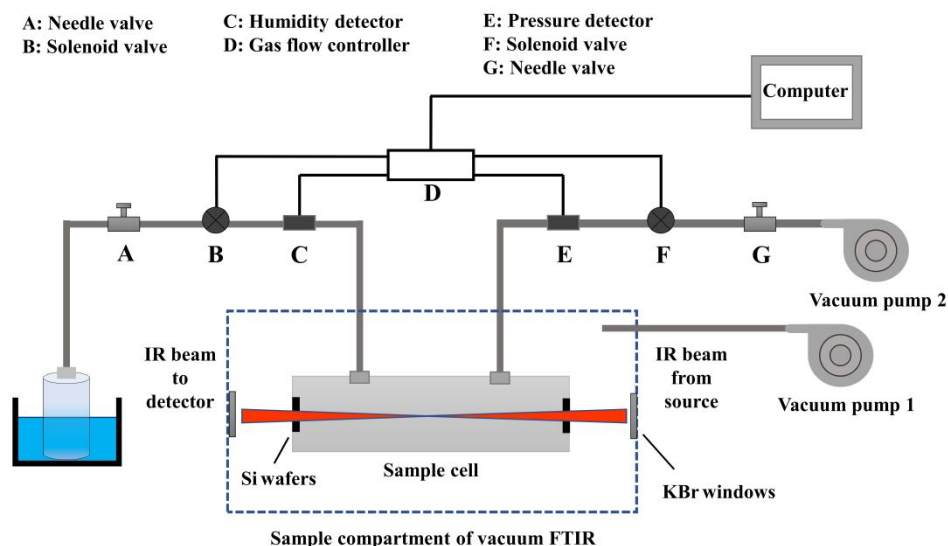


Fig. S1. Schematic diagram of a vacuum FTIR spectrometer coupled with a pulsed RH controlling system.

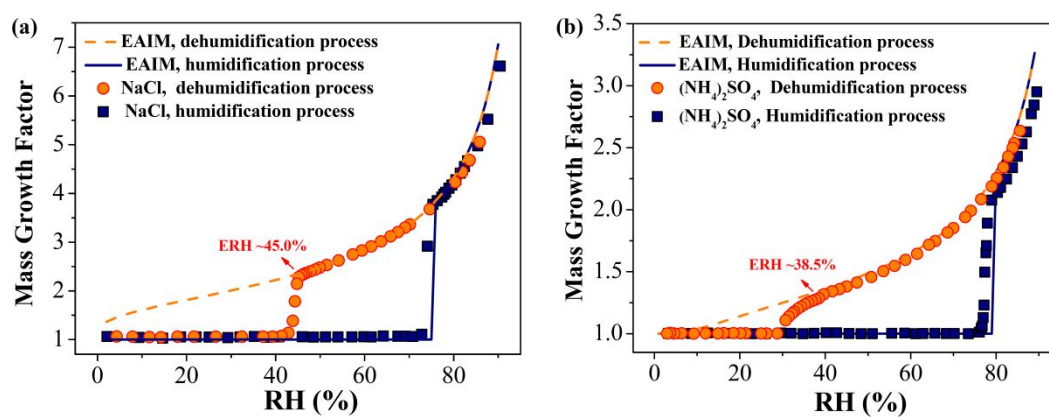


Fig. S2. Hygroscopic cycles of NaCl and (NH₄)₂SO₄ particles deposited on Si substrates.

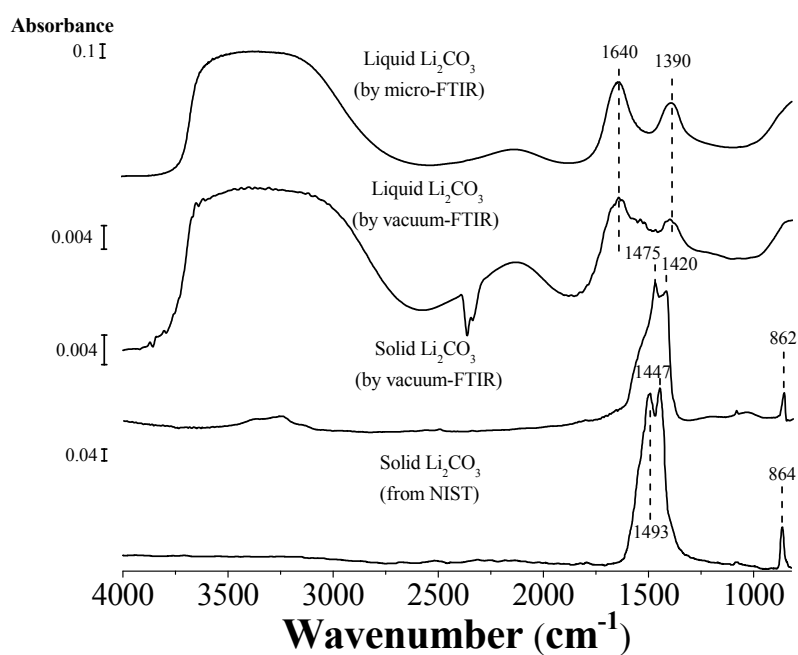


Fig. S3. IR spectra of solid and liquid Li_2CO_3 measured by vacuum FTIR, microscopic FTIR, and obtained from National Institute of Standards and Technology (NIST) Chemistry WebBook.