Supporting Information

Isothermal nucleation rates of *n*-propanol, *n*-butanol, and *n*-pentanol in supersonic nozzles: critical cluster sizes and the role of coagulation

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Figure S1 presents an integrated view of the condensation process. Figure S2 summarizes the results of the small angle X-ray scattering measurements as a function of the partial pressure of condensable at the nozzle inlet.

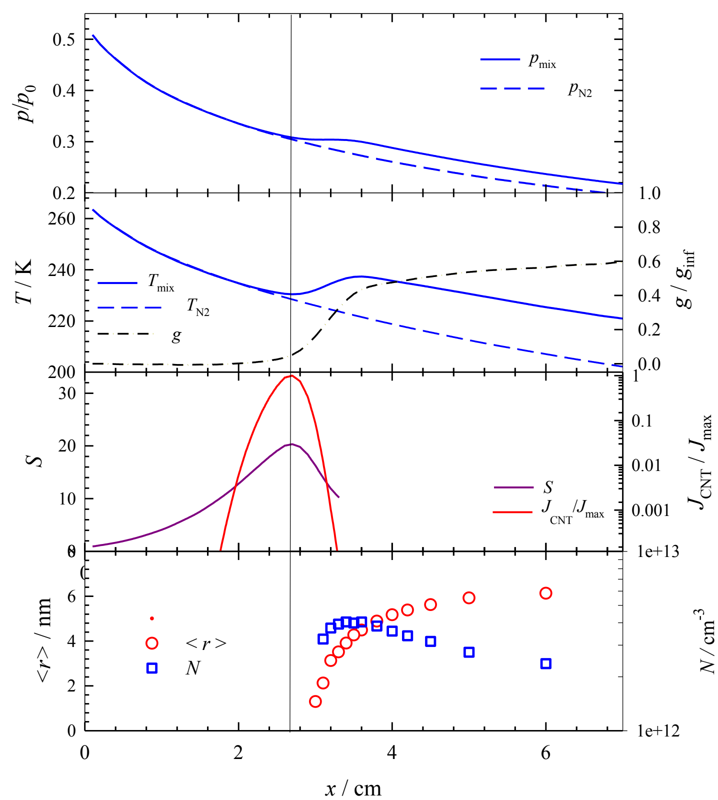

Figure S1. An integrated view of condensation in a supersonic nozzle. Experiments were conducted in H using n-propanol at stagnation conditions of p_0 = 30 kPA, T_0 = 45 °C p_{v0} = 0.39 kPa The pressure measurements (top panel) are analyzed to determine the temperature of the condensing flow, *T,* and the mass fraction condensate, g, (2nd panel) as well as the supersaturation *S* (3rd panel). The values of *T* and *S* were used to determine the scaled nucleation rate profile (3rd panel). The SAXS data (4th panel) provide information on the average particle radius < *r* > and number density *N* of the aerosol.

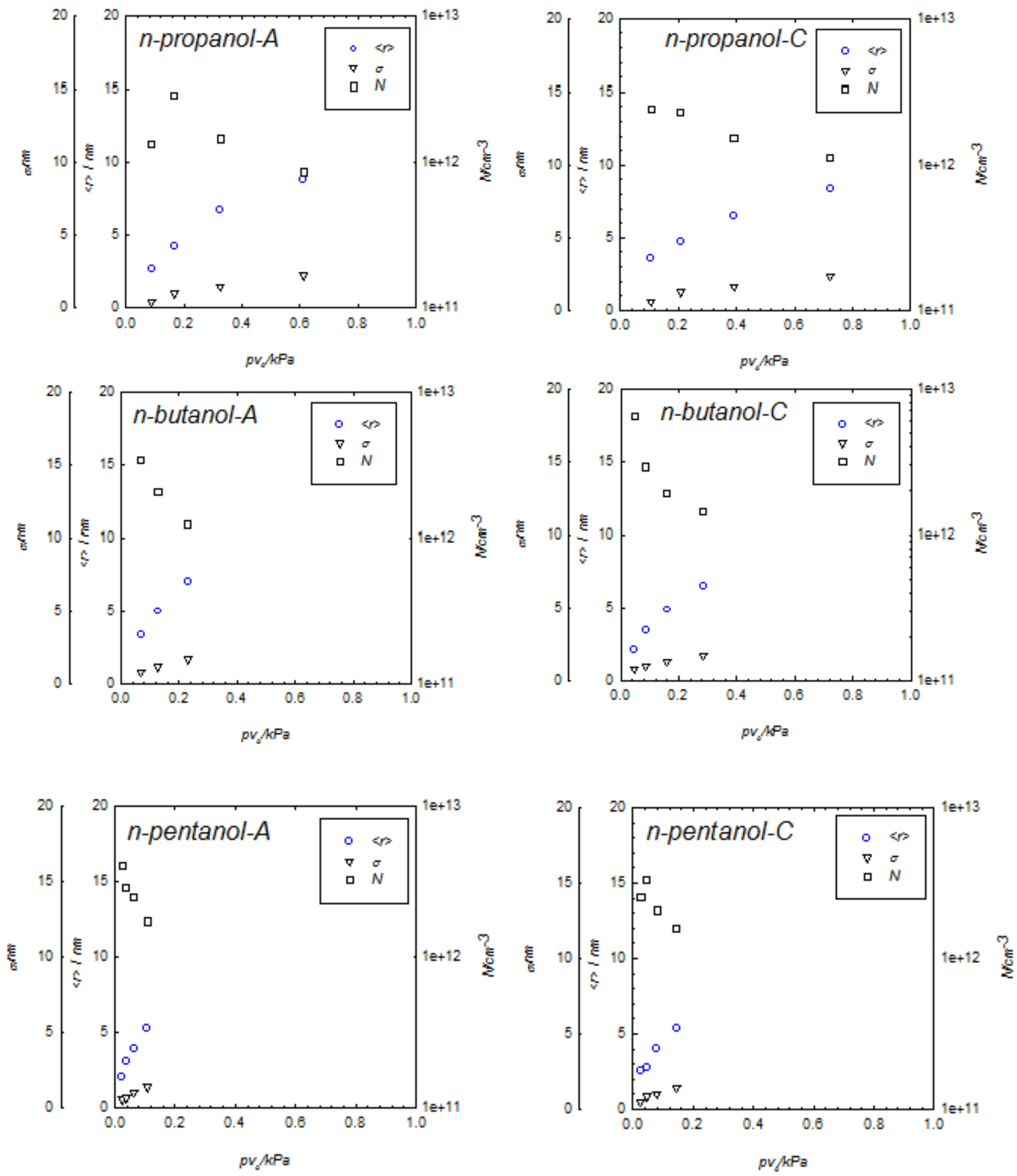

Figure S2. The average droplet radii <*r*>, width of the size distribution function δ, and the number densities *N* determined by SAXS as a function of p_v the partial pressure of condensible at the nozzle inlet. Measurements were made in in nozzles A and C.