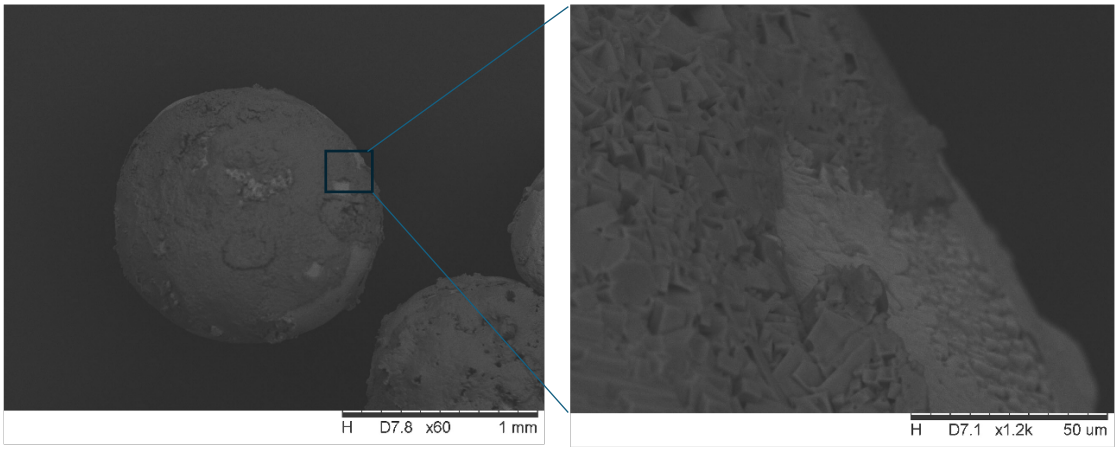


Figure S1. SEM of Spherical crystal surface

Product Performance

The repose angle of KCl crystal products (obtained at ODA-H concentrations of 0.04 mmol/L and 0.06 mmol/L) was determined via experiments, with the results presented in Table S1. As the sphericity of KCl particles increases, the product repose angle decreases notably. Among the tested samples, KCl square particles exhibit the poorest flowability.

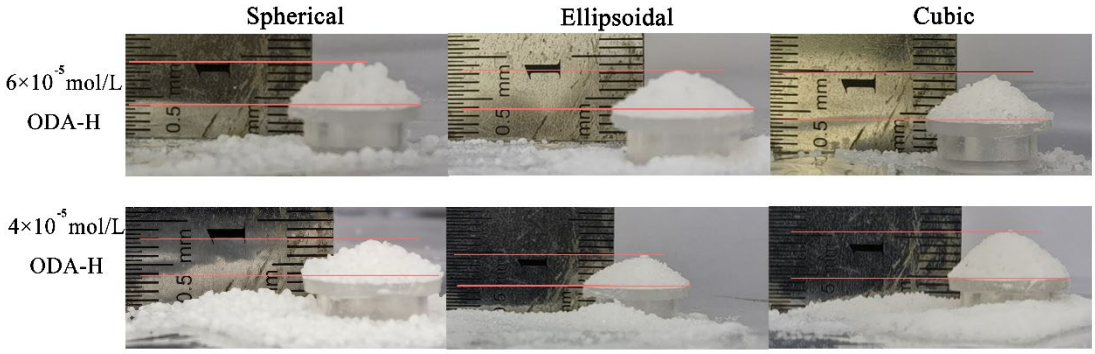


Figure S2. Product Angle of Repose Test

Table S1. Flow Performance of Products

Concentration ODA-H (mol/L)	Crystal morphology	Angle of repose(deg)
4×10^{-5}	Cubic	21.80
	Ellipsoidal	20.14
	Spherical	15.29
6×10^{-5}	Cubic	21.80
	Ellipsoidal	17.05
	Spherical	18.77

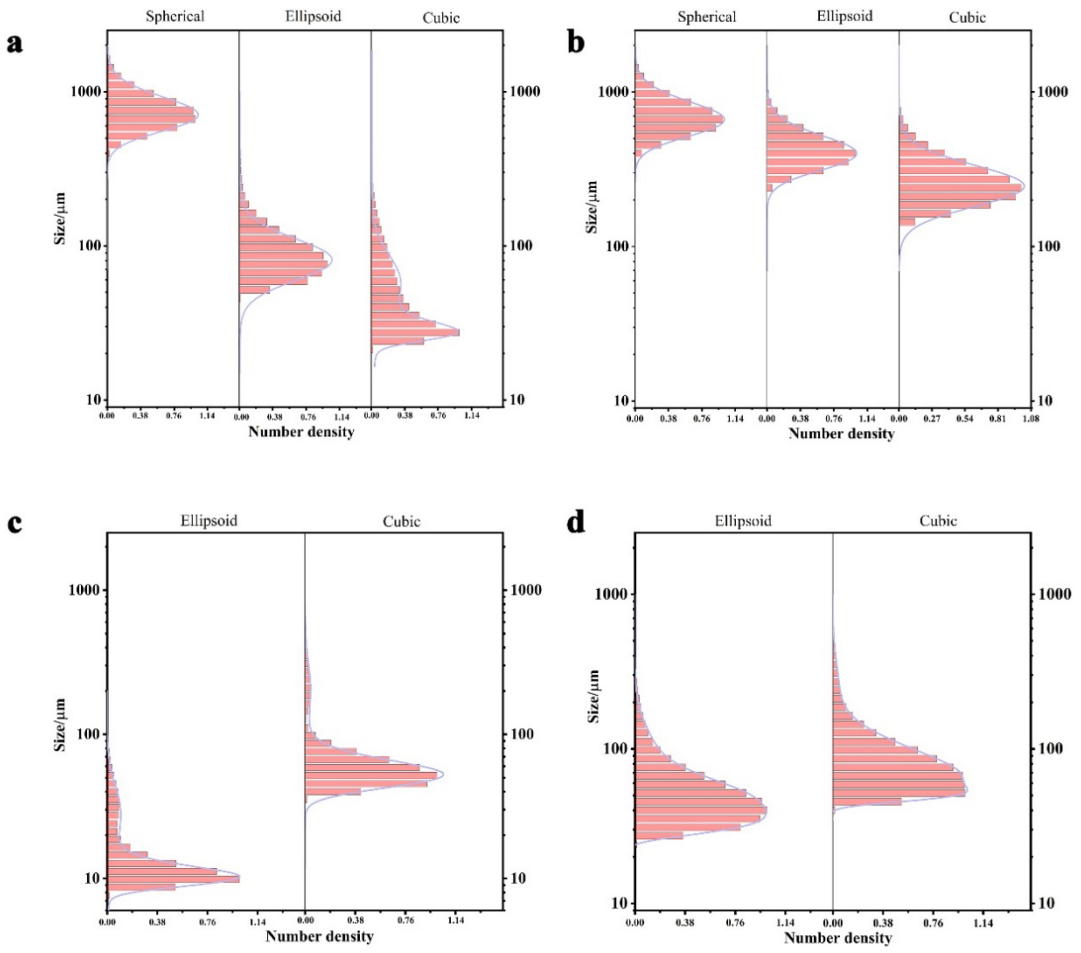


Figure S3. Particle size distribution of potassium chloride crystals with various morphologies under different ODA-H concentrations. a,4×10^{-5}mol/L; b,6×10^{-5}mol/L; c,1×10^{-4}mol/L; d,4×10^{-4}mol/L.