Article:
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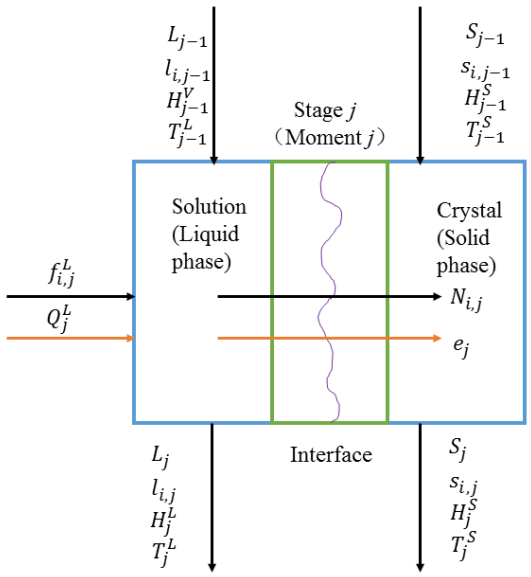

C: number of components

e: interphase energy transfer rate (J/s)

f^{L}:liquid feed(mol/s)

H: enthalpy (J/kmol)

i: component number

j: stage number

L : total liquid mole number (mol)

l: component liquid number (mol)

N : component interphase mass transfer rate (mol/s)

Q^{L} : heat to liquid phase (J/s)

S : total solid mole number (mol)

s: component solid mole number (mol)

T: temperature (K)

Fig. 1 Schematic diagram of non-equilibrium stage model for solution crystallization. Here stage *j* stands for a discretized moment during simulation of the crystal growth

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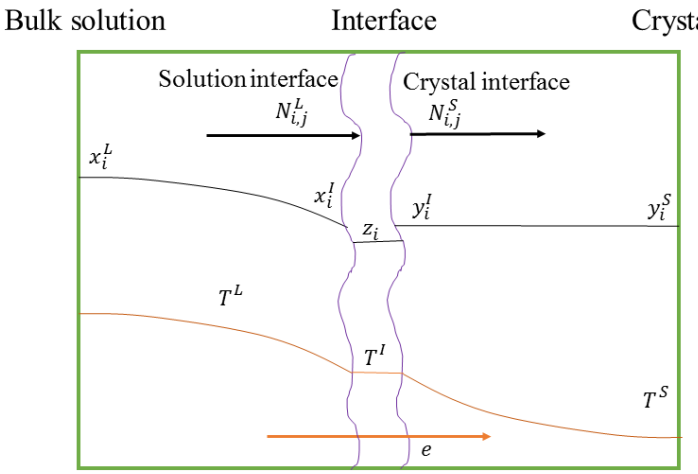

^{L}: liquid bulk

^{I}: interface

^{S}: crystal surface

x: liquid phase composition (mole fraction)

y: solid phase composition (mole fraction)

z: adsorption composition (mole fraction)

Fig.2 Schematic diagram of the interface model

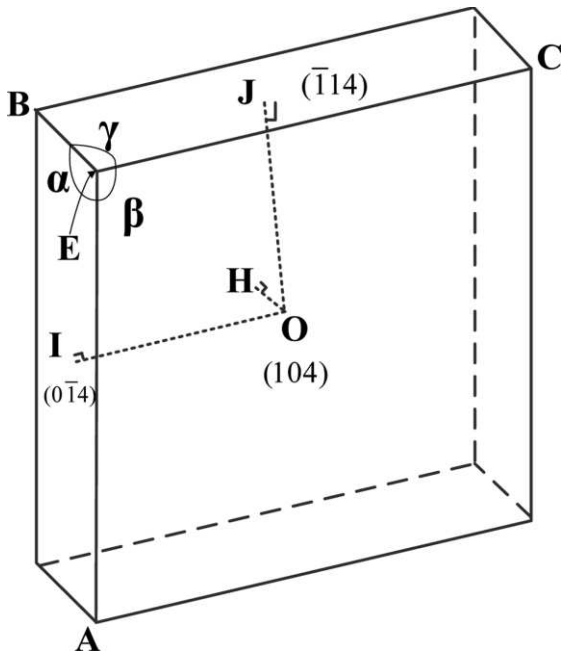

Fig. 3 Equilibrium and experimental morphology of a $NaNO_3$ crystal

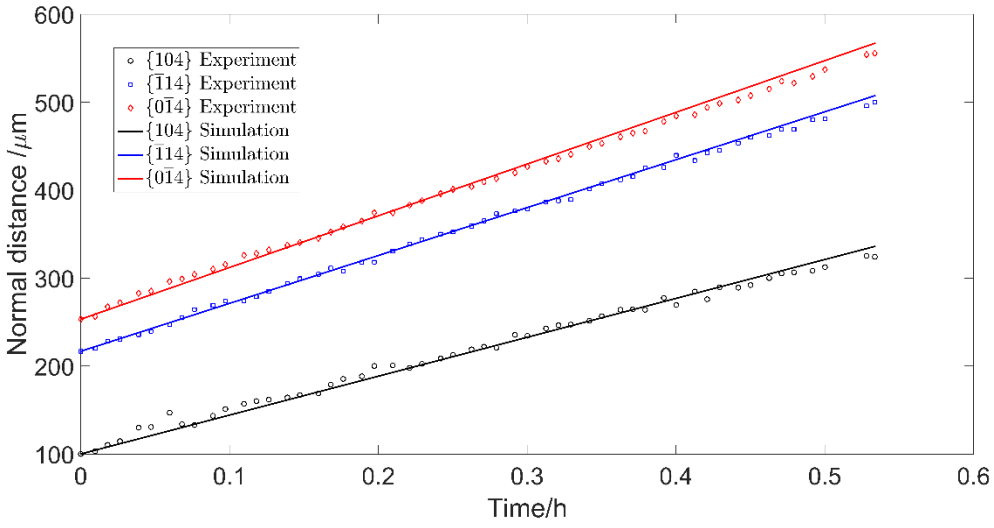

Fig. 4 Comparison of simulated and experimental normal distance evolution of pure $NaNO_3$ crystal growth

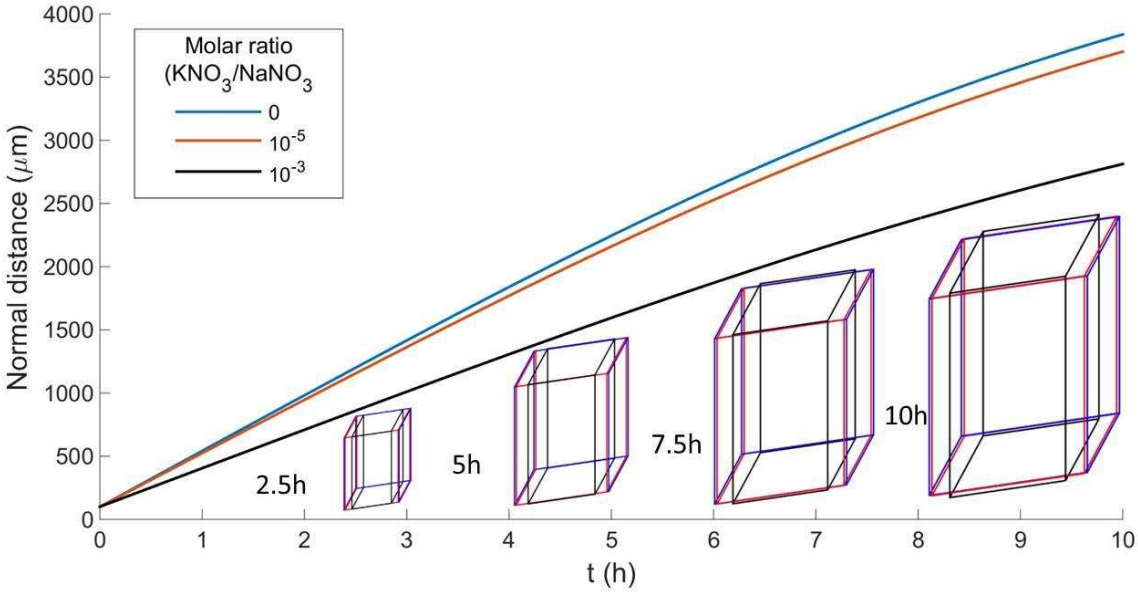

Fig. 5 Evolution normal distance of face {104} and crystal shape during $NaNO_3$ crystal growth with different $KNO_3/NaNO_3$ molar ratio

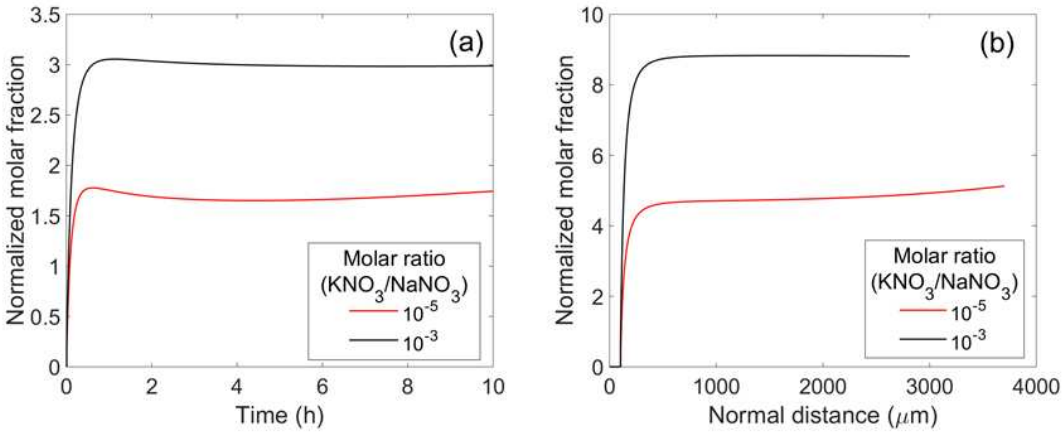

Fig. 6 Crystal with different $KNO_3/NaNO_3$ molar ratio. The molar fraction is normalized throuth dividing it by the initial molar ratio of KNO3/NaNO3 (i.e. 103 or 105). (a) Evolution of KNO_3 molar fraction in the whole crystal (b) KNO_3 molar fraction distribution in the normal direction of face {104}

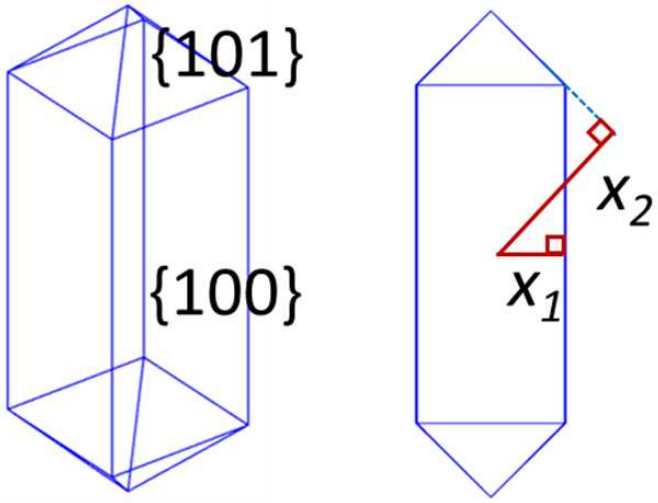

Fig. 7 KDP crystal