

## Supplementary Information

### Manuscript Title:

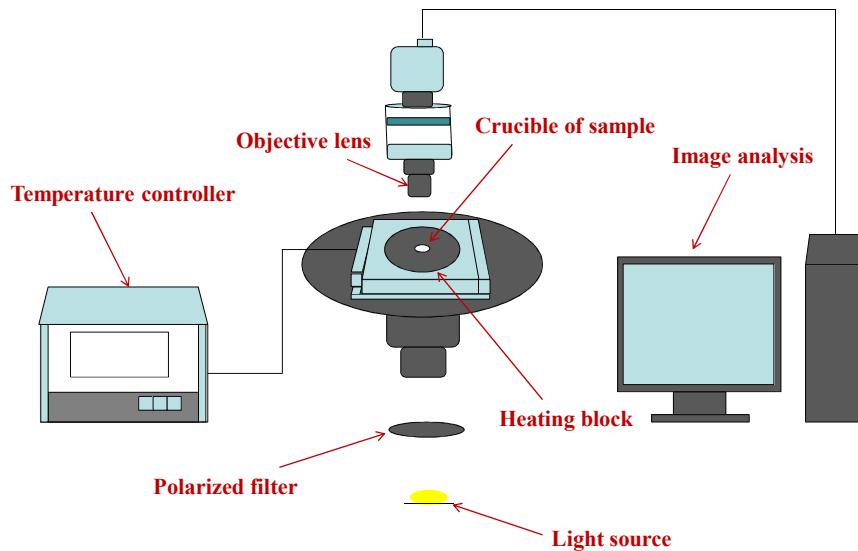
Interplay between Thermodynamics and Kinetics on the Polymorphic Appearance in the Solution Crystallization of an Enantiotropic System—Gestodene

### Author List:

Liang Zhu\*, Li-yu Wang, Zuo-liang Sha\*, Yan-fei Wang, Li-bin Yang, Xiao-yu Zhao, Wei Du

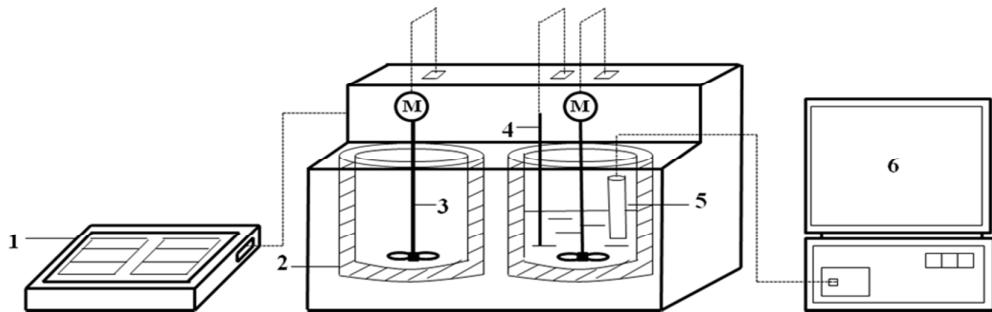
Tianjin Key Laboratory of Marine Resources and Chemistry, College of Chemical Engineering and Materials Science, Tianjin University of Science & Technology, Tianjin 300457, China

### Figures:

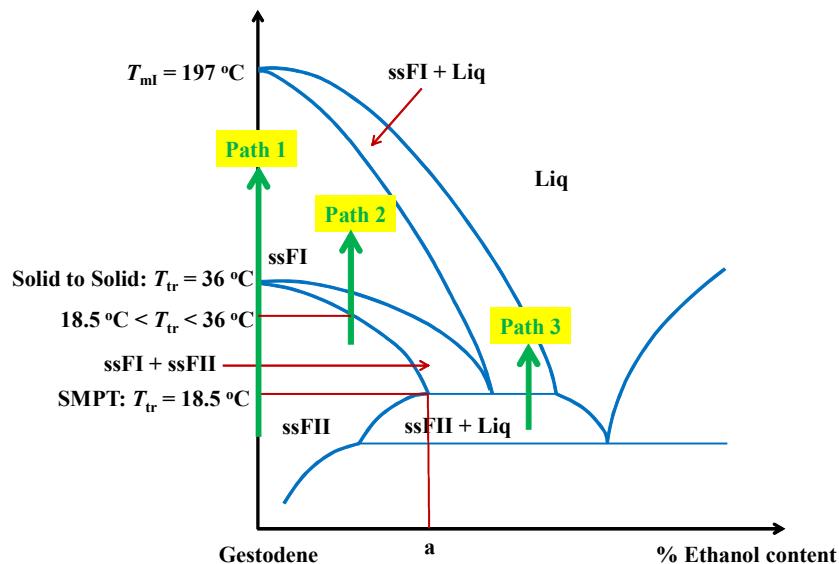


**Figure S1.** Hot-stage polarized-light video-microscopy experimental set up used to observe nucleation and crystal growth in situ.

\* Corresponding authors. Tel.: +86 022 60601110; fax: Tel.: +86 022 60601110  
Email address: [zhuliang@tust.edu.cn](mailto:zhuliang@tust.edu.cn) (Liang Zhu), [zsha@tust.edu.cn](mailto:zsha@tust.edu.cn) (Zuo-liang Sha).



**Figure S2.** Schematic diagram of experimental apparatus for the measurement of induction periods: 1. Controller of the automatic reactor; 2. Temperature control unit; 3. Stirring; 4. Thermometer; 5. Focused beam reflectance measurement probe; 6. Computer equipped with iC FBRM® software.



**Figure S3.** Possible phase diagram of gestodene-ethanol system. Path 1: solid-to-solid phase transition, II→I, ethanol content = 0 %; Path 2: solid-to-solid phase transition II→I, 0 % < ethanol content < a %; Path 3: SMPT, II→I; ssFI: solid state form I; ssFII: solid state form II; Liq: ethanol solution;  $T_{tr}$ : phase transition temperature;  $T_{ml}$ : melting temperature of form I.