

Supplementary Information for *Acta Phys. -Chim. Sin.*, 2010, 26(7): 1837-1841

## $\beta$ -环糊精与系列无机盐分子-离子加合物的粉末 X 射线衍射分析

党 政                      宋乐新\*

(中国科学技术大学高分子科学与工程学系, 中国科学院软物质化学重点实验室, 合肥 230026)

## **Powder X-Ray Diffraction Analyses for Molecule-Ion Adducts of $\beta$ -Cyclodextrin with a Series of Inorganic Salts**

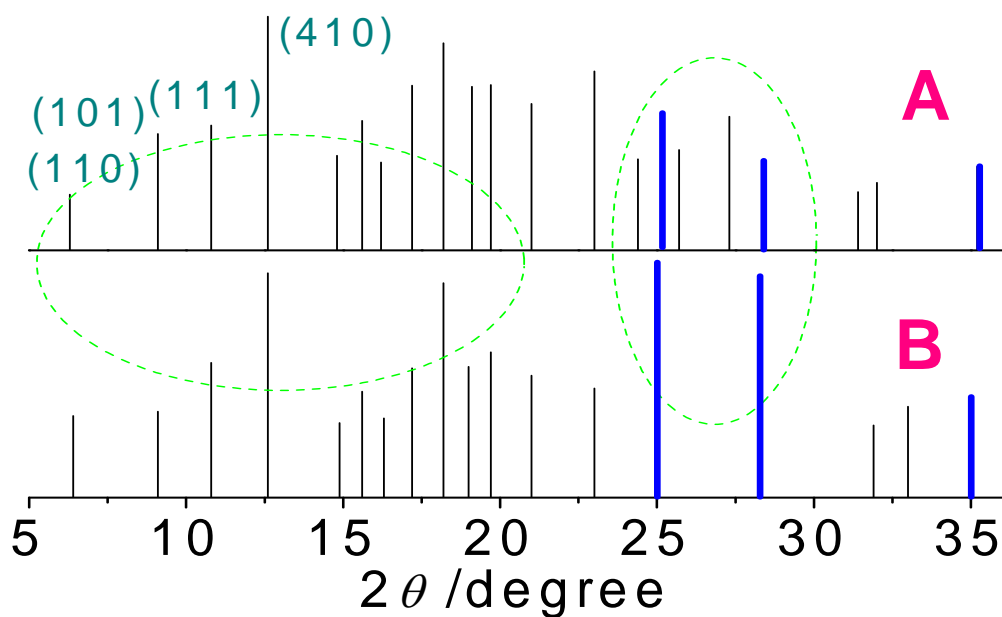
DANG Zheng                      SONG Le-Xin \*

(CAS Key Laboratory of Soft Matter Chemistry, Department of Polymer Science and Engineering,  
University of Science and Technology of China, Hefei 230026, P. R. China)

\*Corresponding author. Email: solexin@ustc.edu.cn; Tel: +86-551-3601804.

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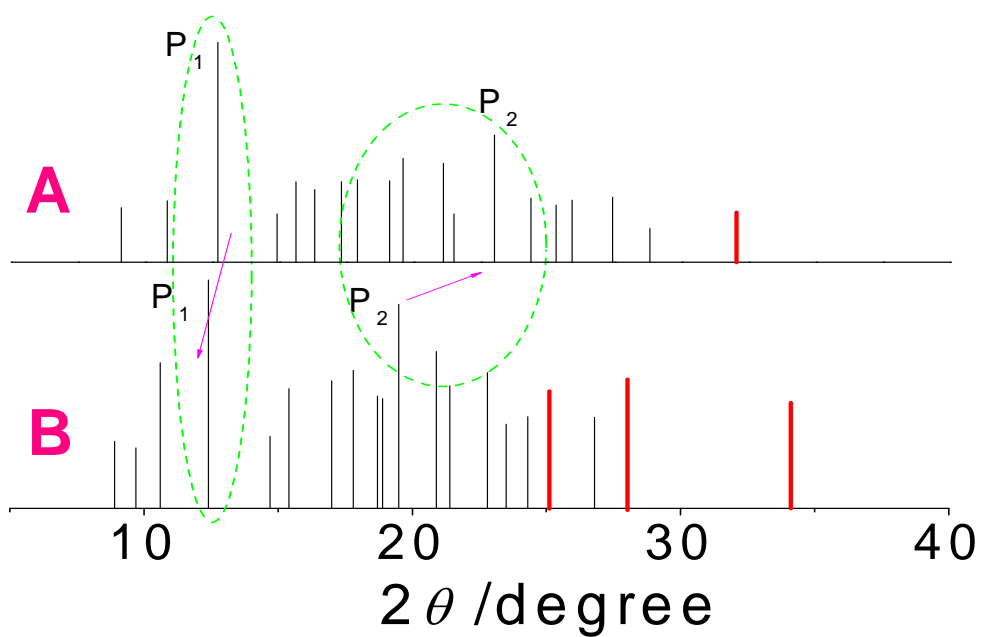
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**Fig.S1** Linear PXRD of unground mixture (A) and ground mixture (B) of NaAsO<sub>2</sub> with  $\beta$ -CD

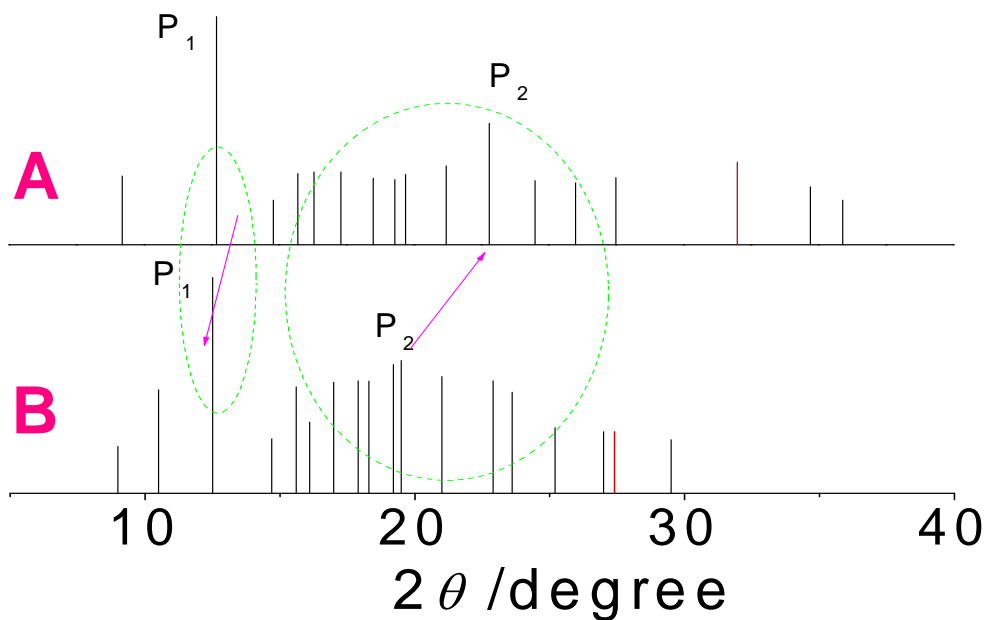
Those signals shown in bolder lines come from NaAsO<sub>2</sub>.

The comparison in linear PXRD spectra between the unground (Fig.S1A) and ground mixtures (Fig.S1B) of  $\beta$ -CD with NaAsO<sub>2</sub> indicates the profiles of them are highly similar to each other. Also, these patterns are somewhat like that of  $\beta$ -CD at lower  $2\theta$  angles ( $< 22^\circ$ ), but at higher  $2\theta$  angles, they have large difference from  $\beta$ -CD itself. This result suggests that although a molecule-ion interaction is likely to occur in the form of a physical mixture, the effect of them on the stacking behavior of  $\beta$ -CD is not comparable with the effect of similar interactions on the molecular arrangement of  $\beta$ -CD in its adducts.



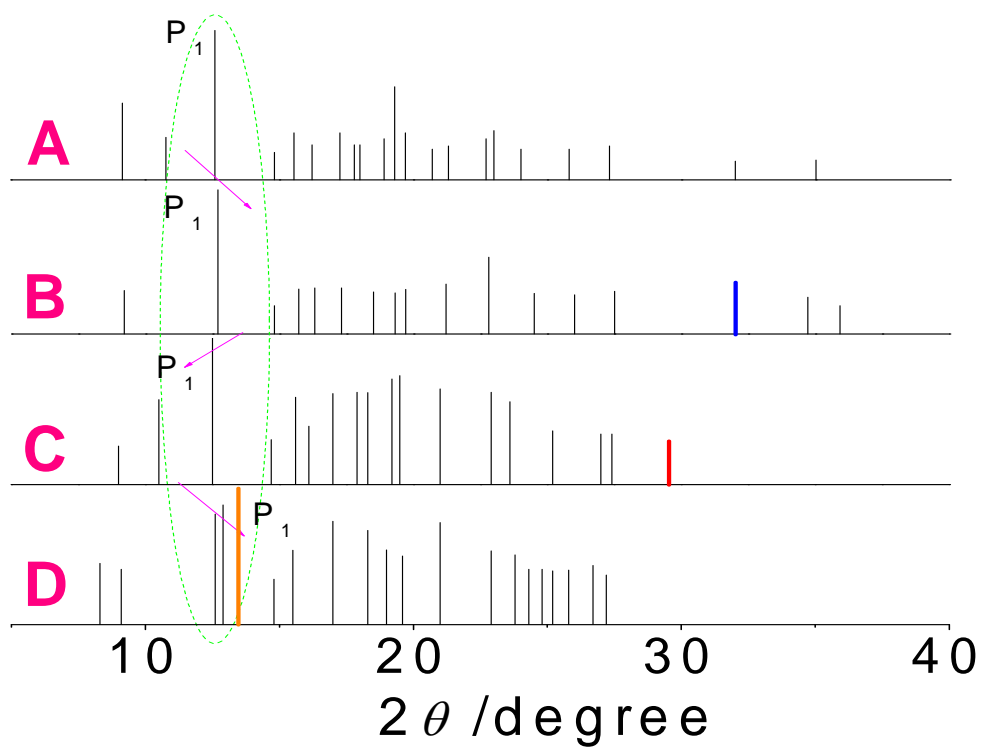
**Fig.S2** Linear PXRD spectra of two adducts: NaCl- $\beta$ -CD (A) and NaAsO<sub>2</sub>- $\beta$ -CD (B)

Those signals shown in blue and red lines come from NaCl and NaAsO<sub>2</sub>, respectively.



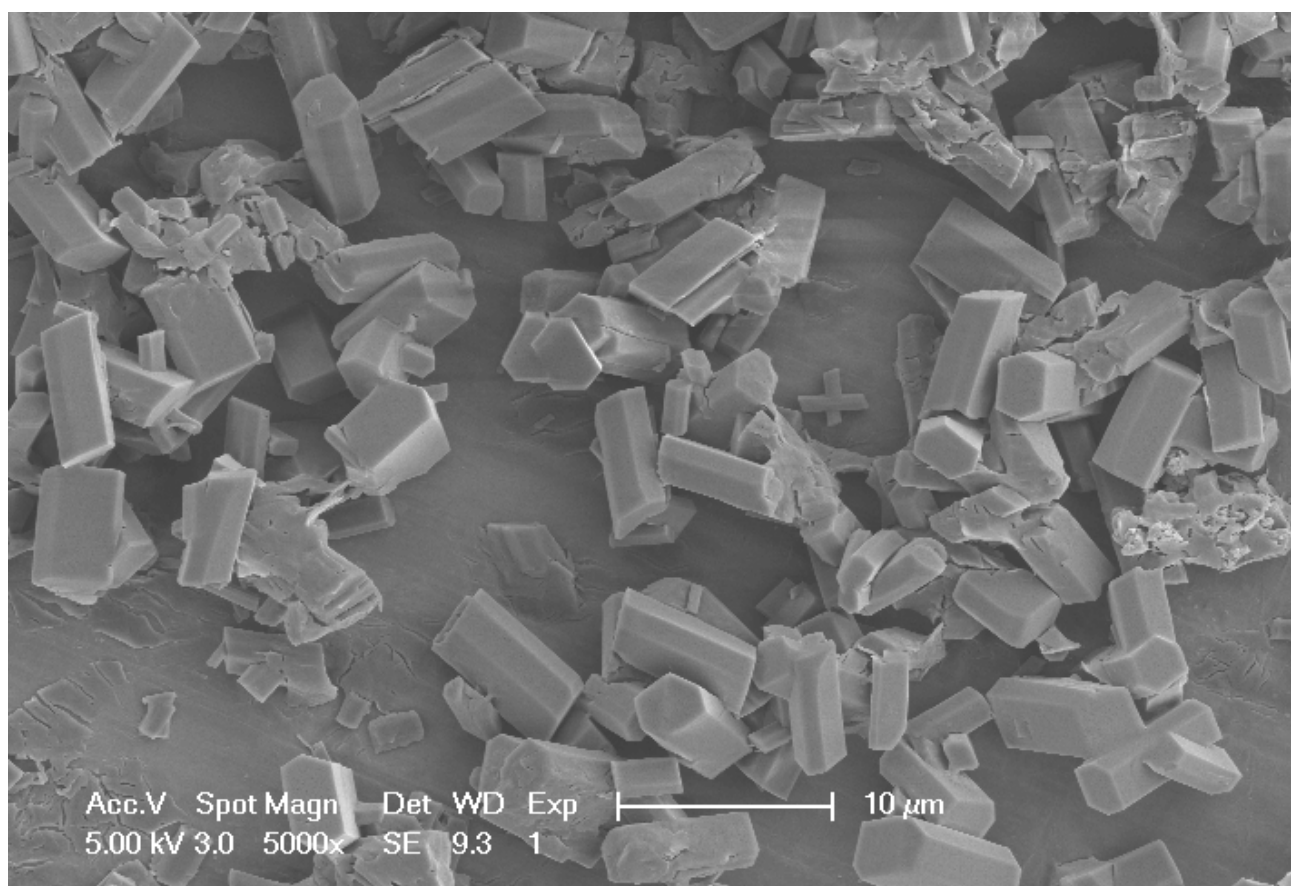
**Fig.S3** Linear PXRD spectra of two adducts: KCl- $\beta$ -CD (A) and KNO<sub>3</sub>- $\beta$ -CD (B)

Those signals shown in blue and red lines come from KCl and KNO<sub>3</sub>, respectively.

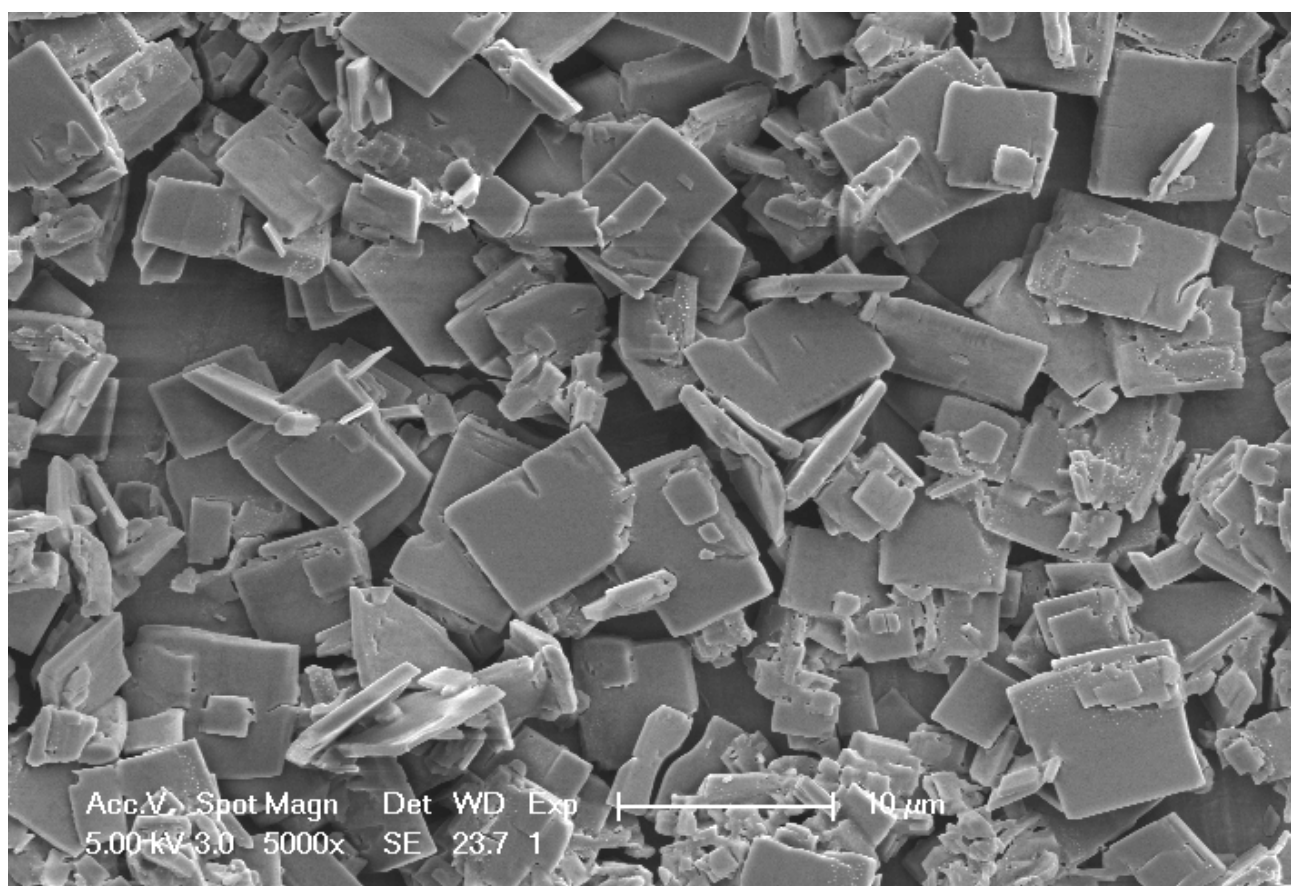


**Fig.S4** Linear PXRD spectra of  $\beta$ -CD (A), KCl- $\beta$ -CD (B),  $\text{CaCl}_2$ - $\beta$ -CD (C) and  $\text{LaCl}_3$ - $\beta$ -CD (D)

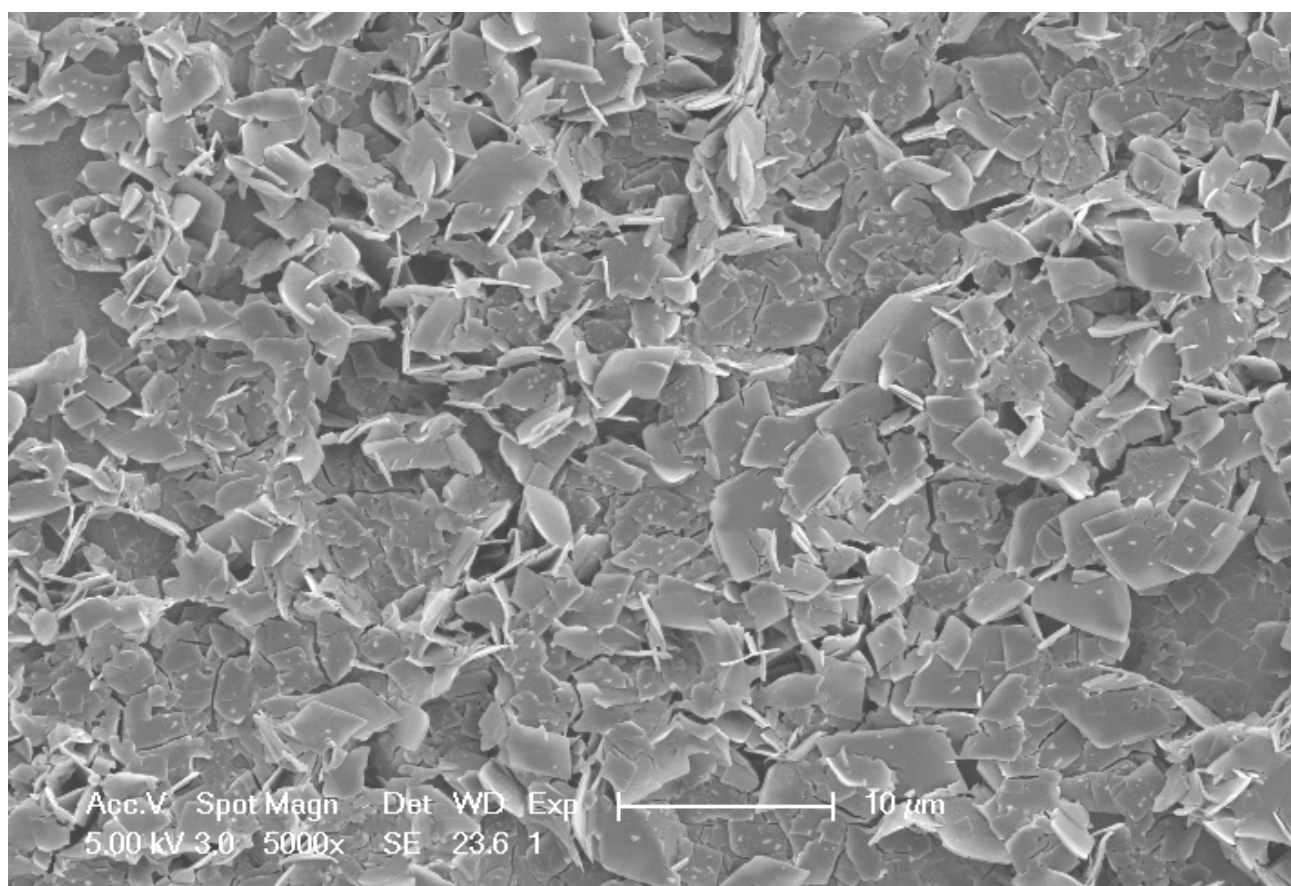
Those signals shown in blue, red and orange lines come from KCl,  $\text{CaCl}_2$  and  $\text{LaCl}_3$ , respectively.



**Fig.S5** SEM image of  $\beta$ -CD

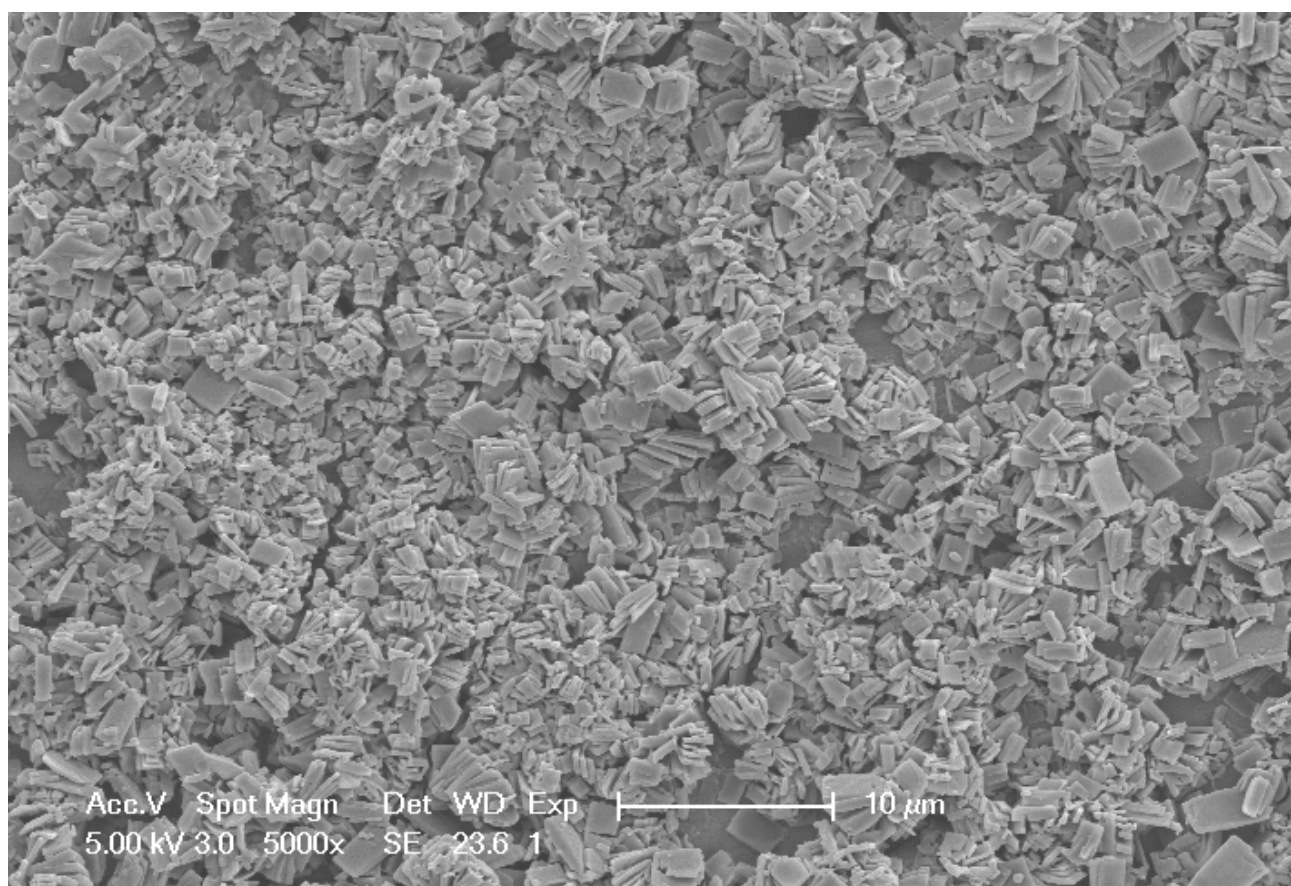


**Fig.S6** SEM image of NaCl- $\beta$ -CD



**Fig.S7** SEM image of KCl- $\beta$ -CD





**Fig.S8** SEM image of  $\text{NH}_4\text{Cl}-\beta\text{-CD}$