

# IUCrJ

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**Supporting information for article:**

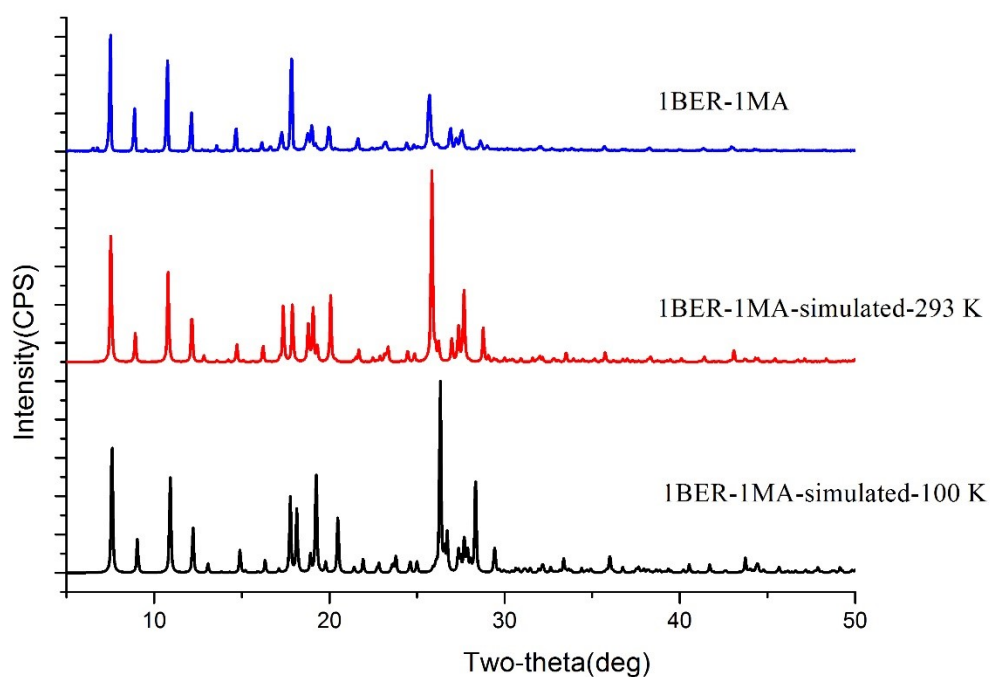
**Novel multi-component crystals of berberine with improved  
pharmaceutical properties**

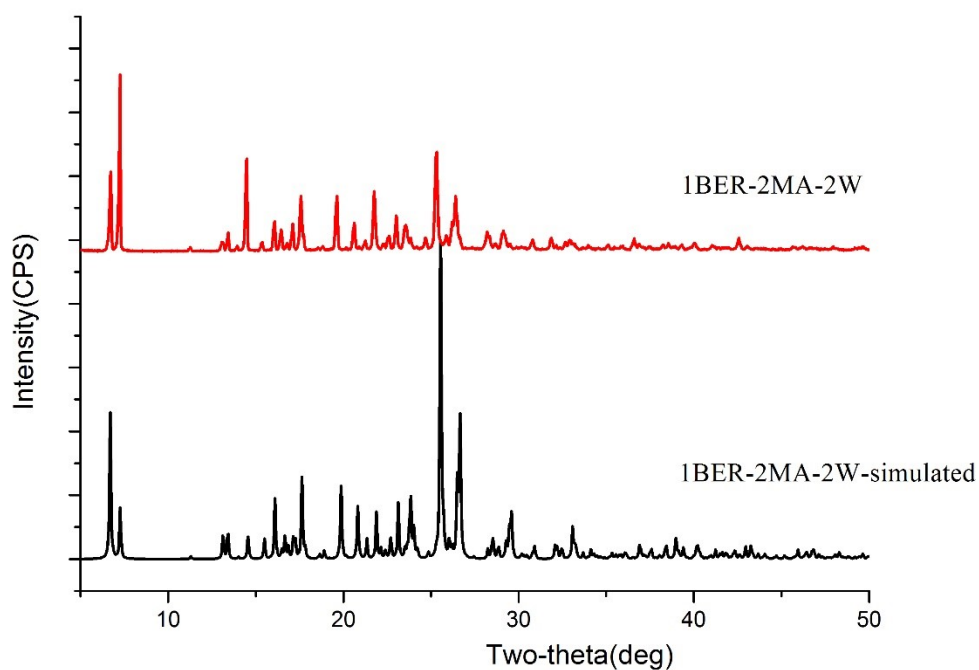
**Guoshun Zhang, Xirui Yang, Xiaoqing Shang, Wei Han, Fengfeng Wang,  
Shurong Ban and Shuqiu Zhang**

**Table 1.** Reactive crystallization experiments of 8H-HBER and MA in different mixed solvents

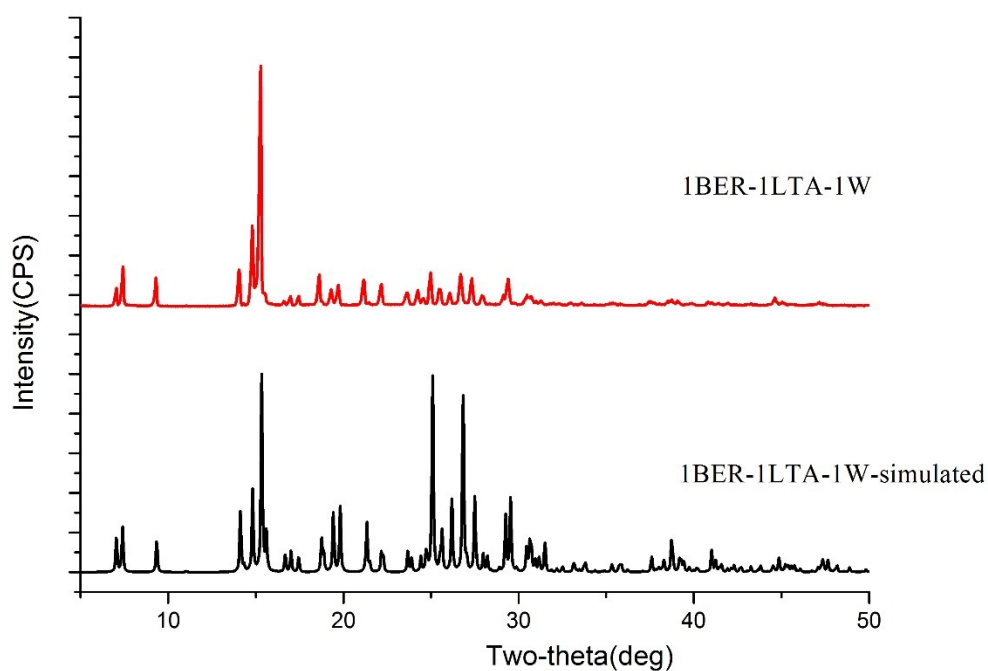
8H-HBER/MA(molar ratio)	V(ml)/V(ml)	2/0	1.8/0.2	1.8/0.4	1.4/0.6	1.0/1.0	0.6/1.4
1:1	Ethanol -water	1	1	1	1	1	1
1:1	Acetone-water	*	2	2	2	2	2
1:2	Ethanol -water	1	1	2	2	2	2
1:2	Acetone-water	*	2	2	2	2	2

Note: 1 and 2 represent 1BER-1MA and 1BER-2MA-2W, respectively. \*: The experiment was not carried out due to the low solubility of the reactants in the solvent system.

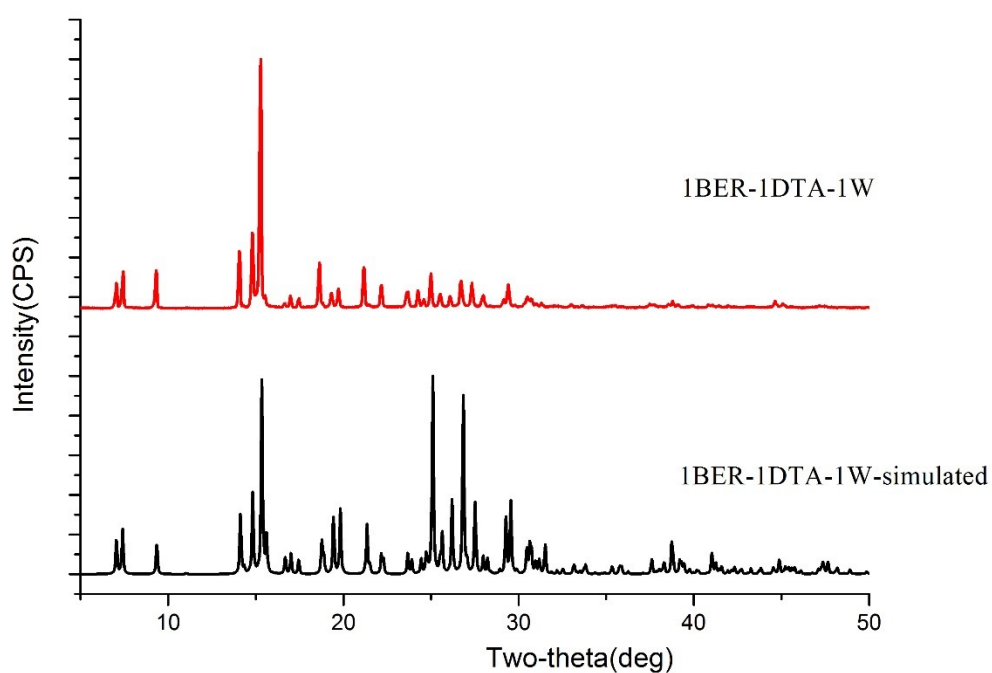
**Figure 1** The experiment and calculated PXRD patterns of 1BER-1MA



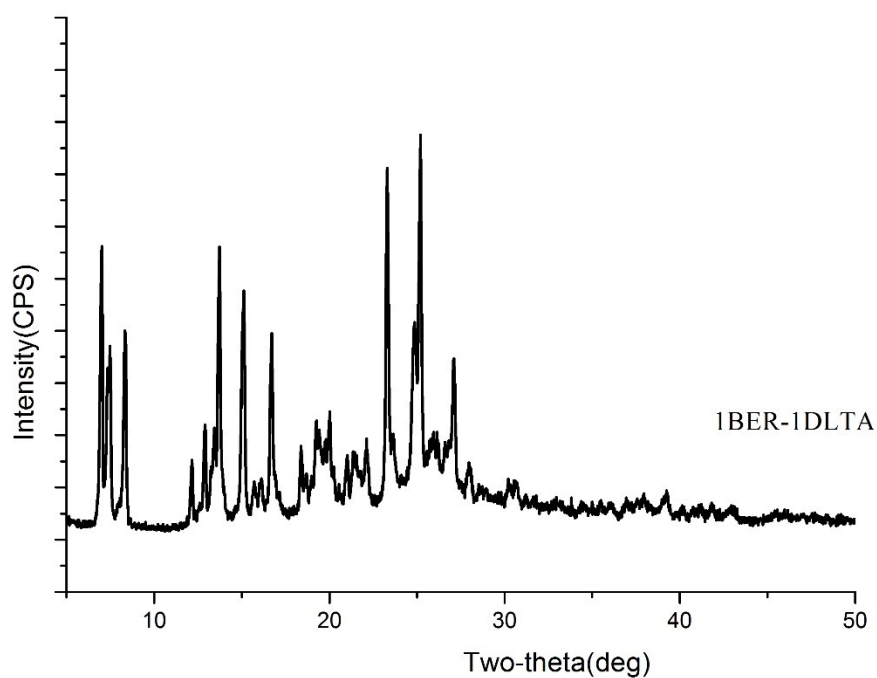
**Figure 2** The experiment and calculated PXRD patterns of 1BER-2MA-2W



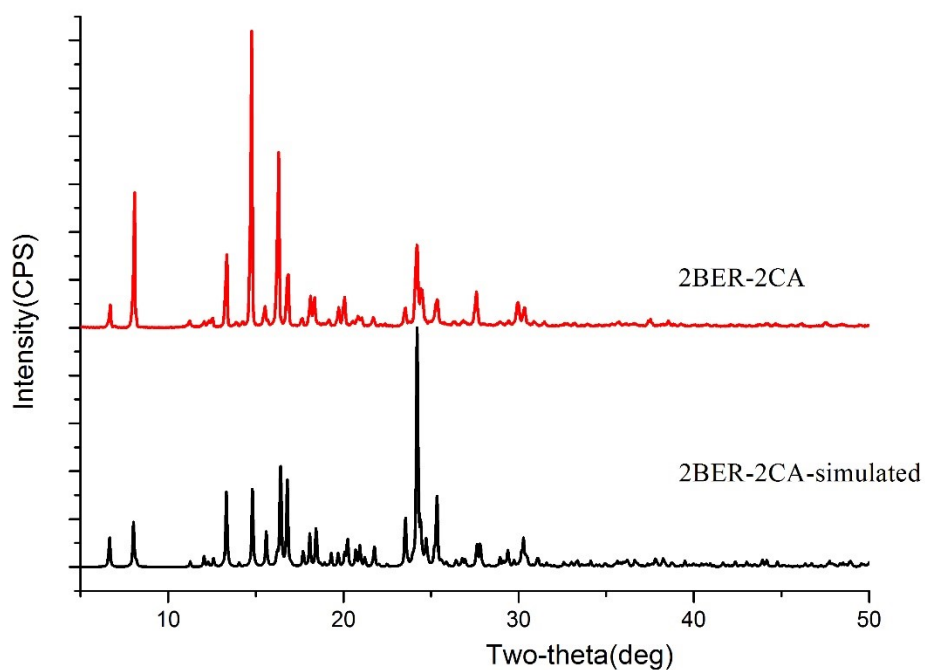
**Figure 3** The experiment and calculated PXRD patterns of 1BER-1LTA-1W



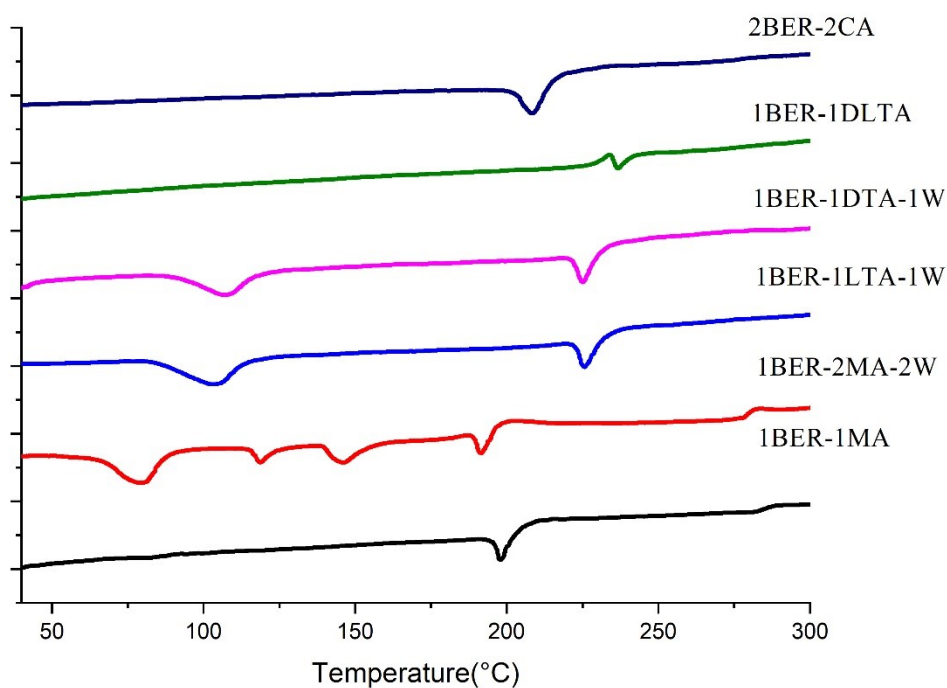
**Figure 4** The experiment and calculated PXRD patterns of 1BER-1DTA-1W



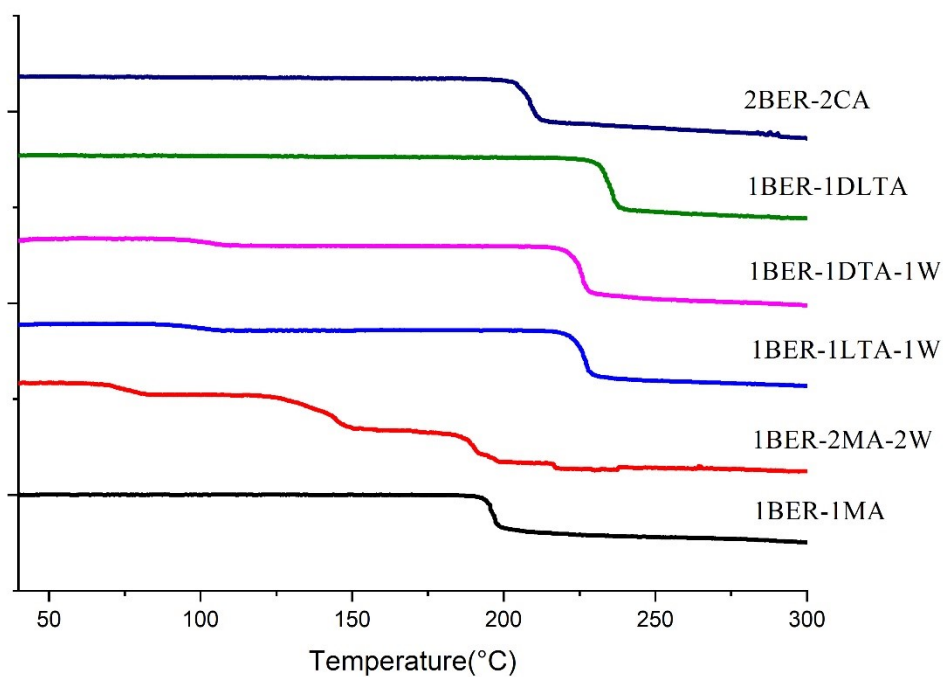
**Figure 5** The experiment PXRD patterns of 1BER-1DLTA



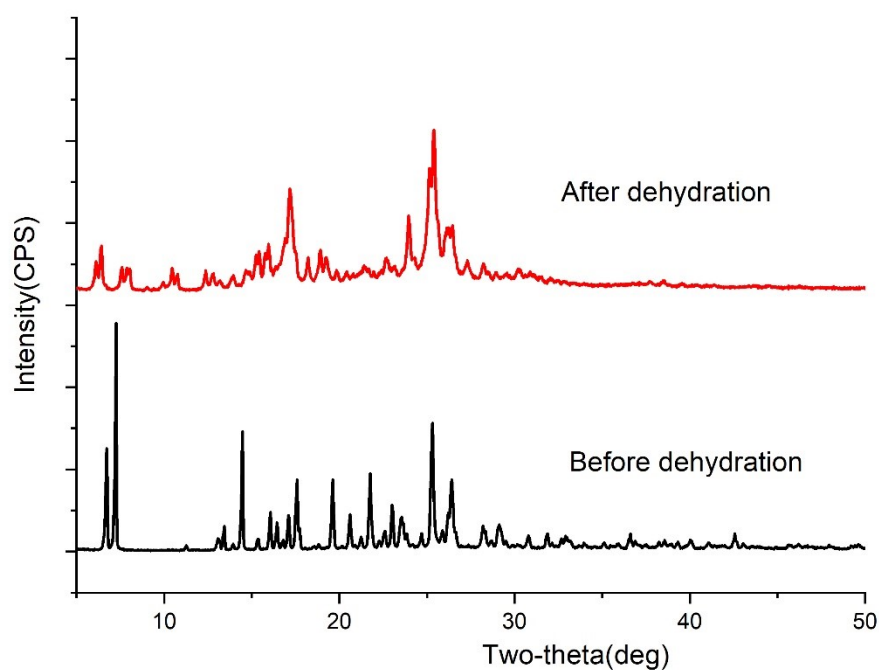
**Figure 6** The experiment and calculated PXRD patterns of 2BER-2CA



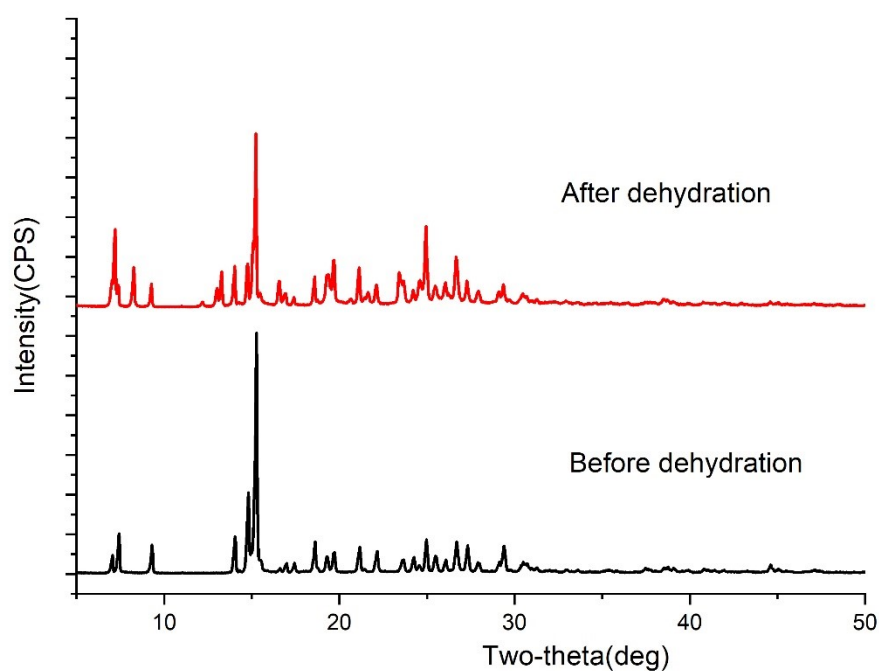
**Figure 7** DSC profiles of six kinds of the BER related solid forms



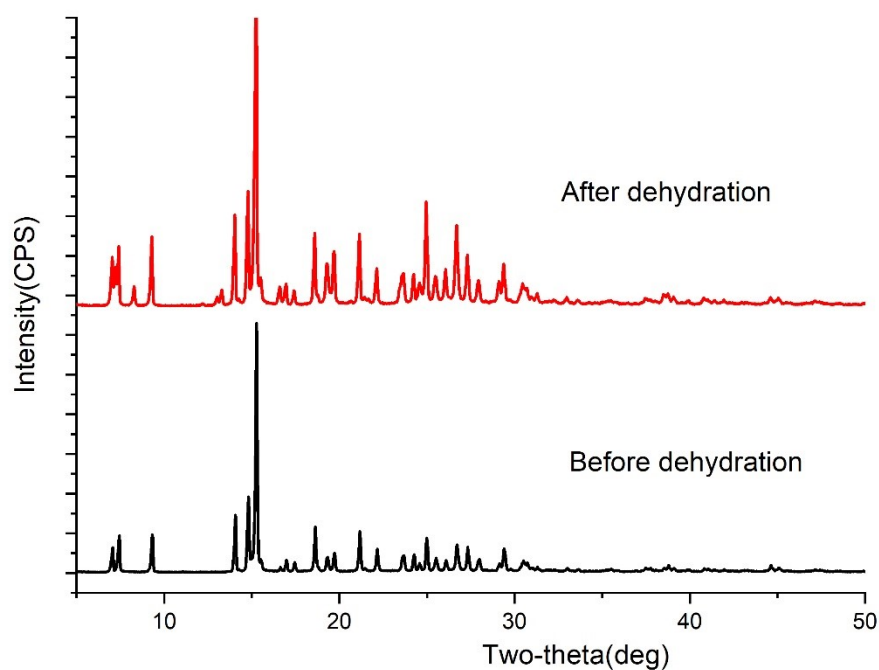
**Figure 8** TGA profiles of six kinds of the BER related solid forms



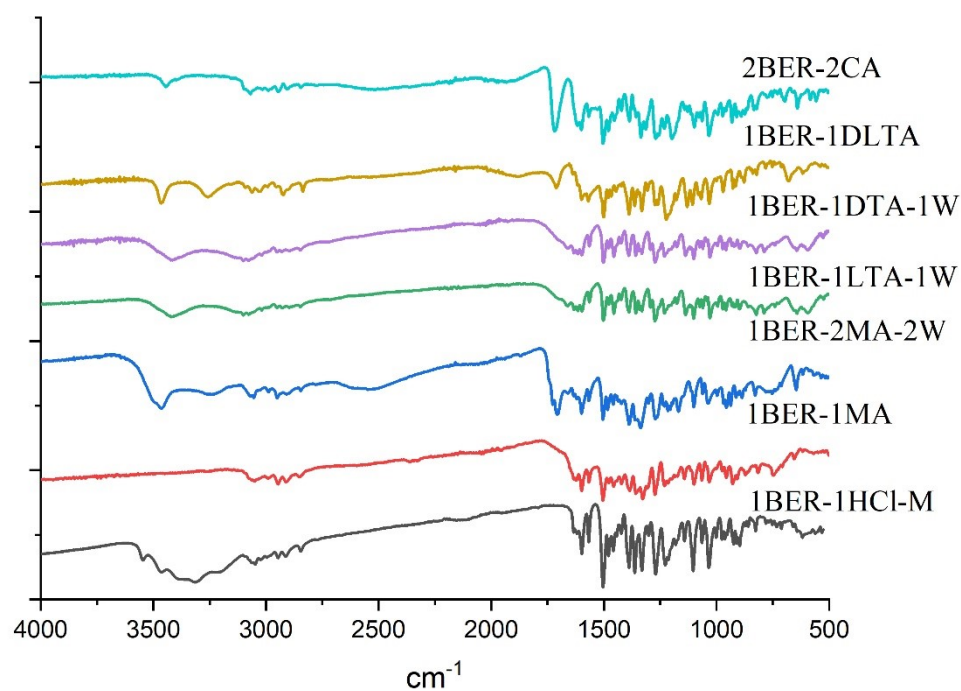
**Figure 9** The experiment PXRD patterns of 1BER-2MA-2W before and after dehydration



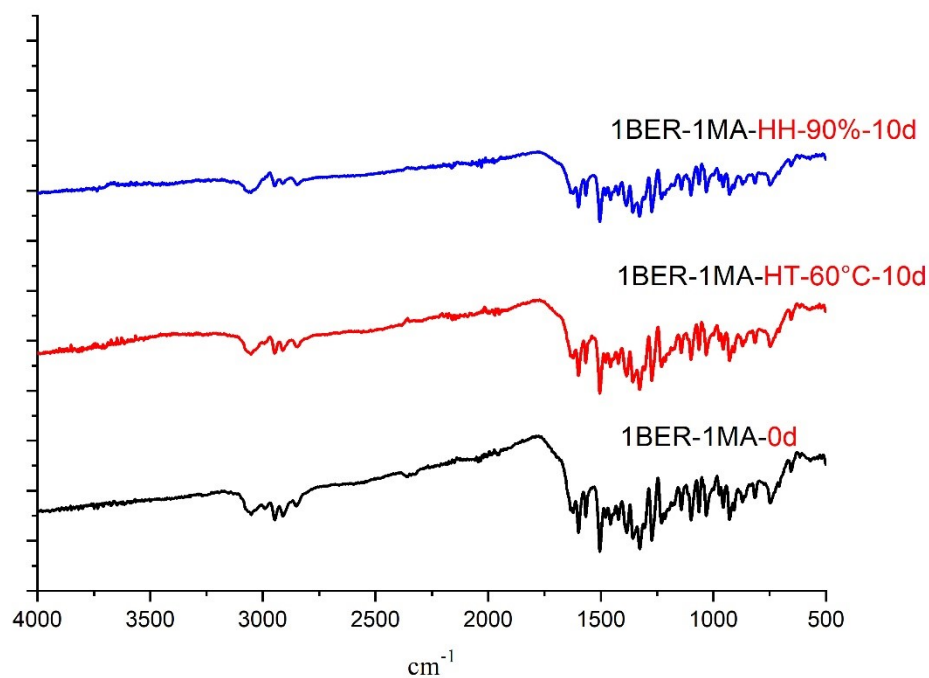
**Figure 10** The experiment PXRd patterns of 1BER-1LTA-1W before and after dehydration



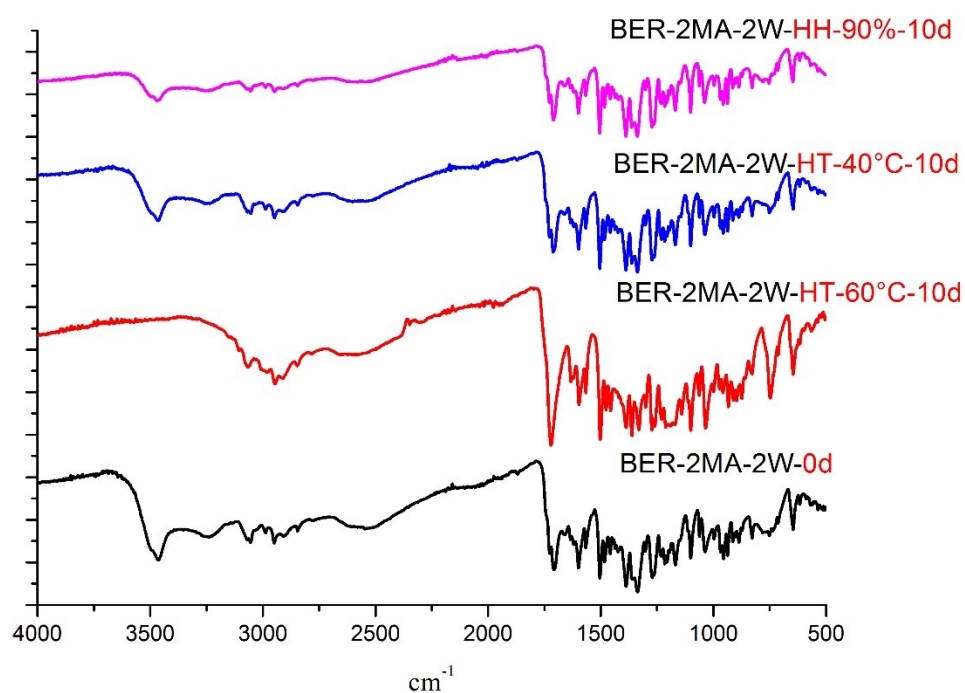
**Figure 11** The experiment PXRd patterns of 1BER-1DTA-1W before and after dehydration



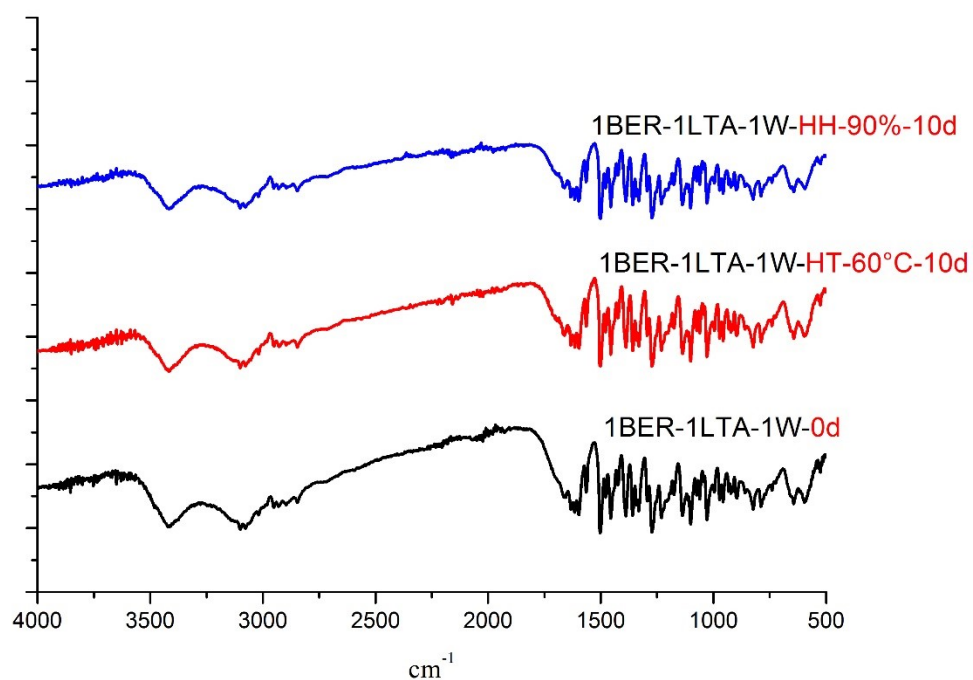
**Figure 12** FT-IR profiles of seven kinds of the BER related solid forms



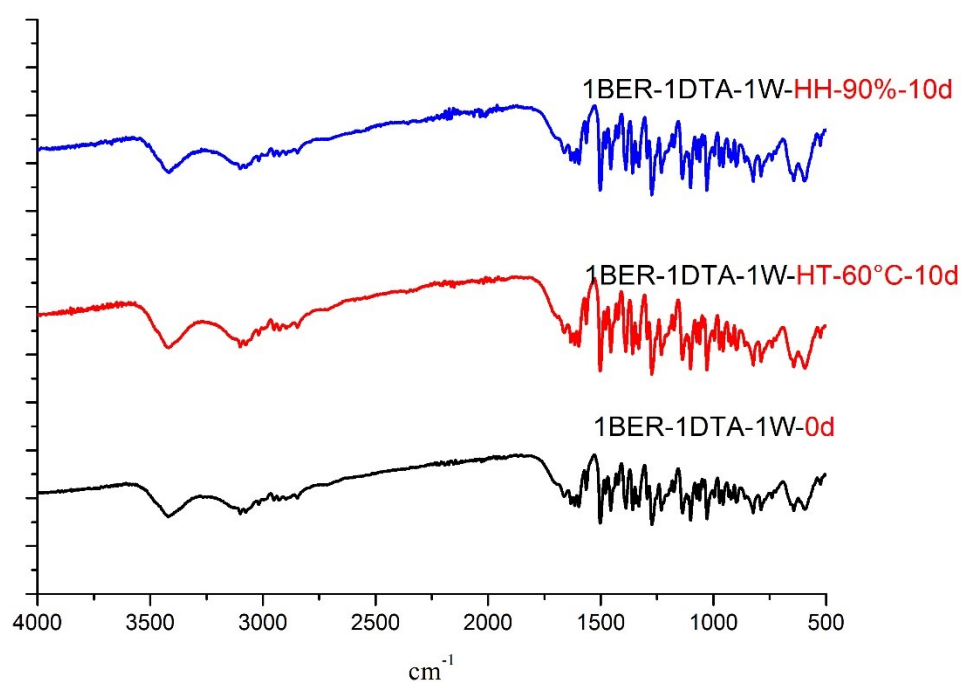
**Figure 13** FT-IR profiles of stability of 1BER-1MA



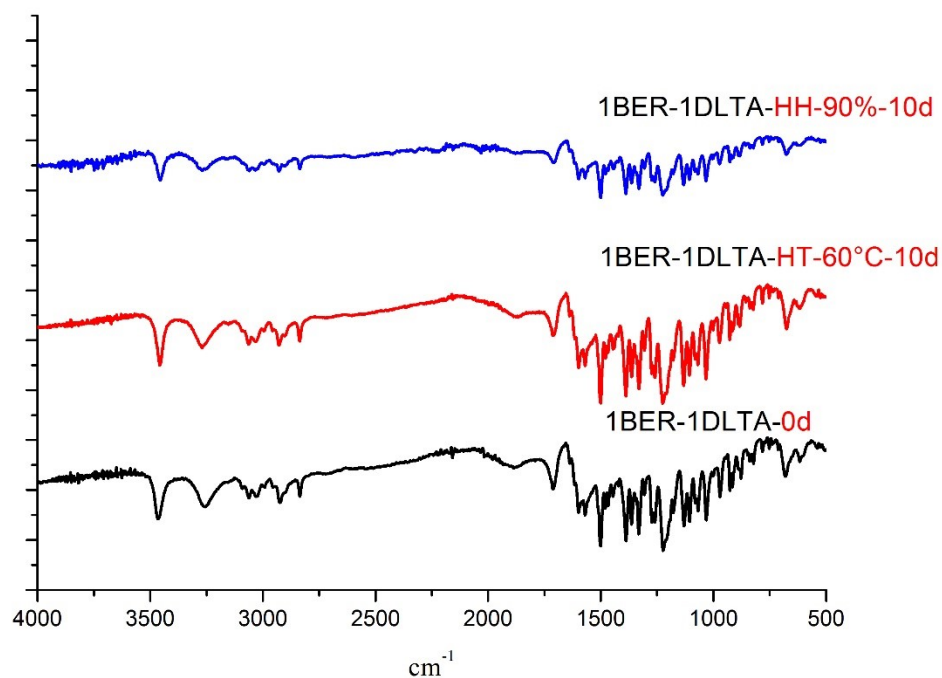
**Figure 14** FT-IR profiles of stability of 1BER-2MA-2W



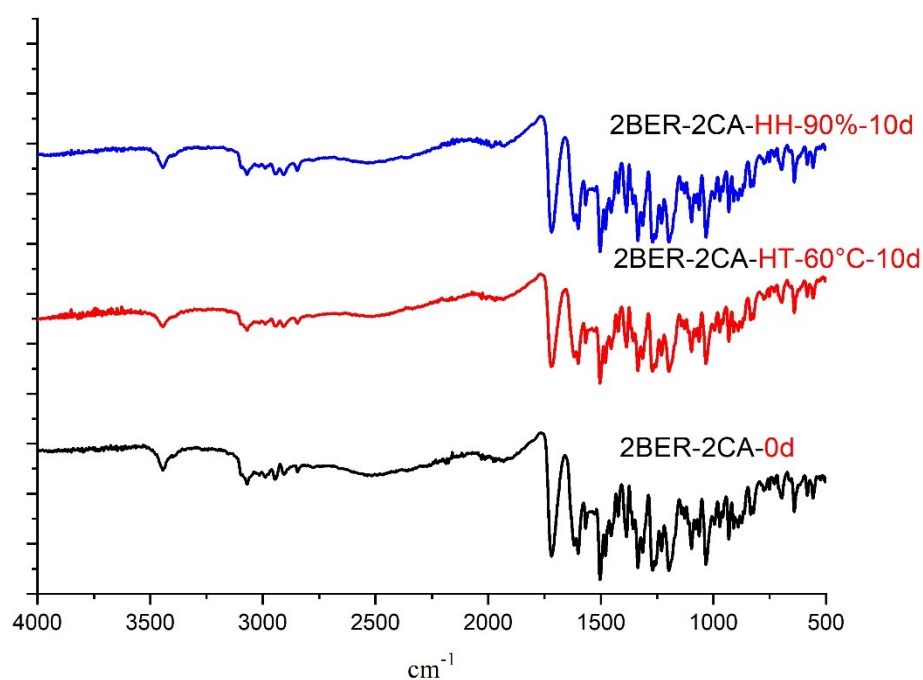
**Figure 15** FT-IR profiles of stability of 1BER-1LTA-1W



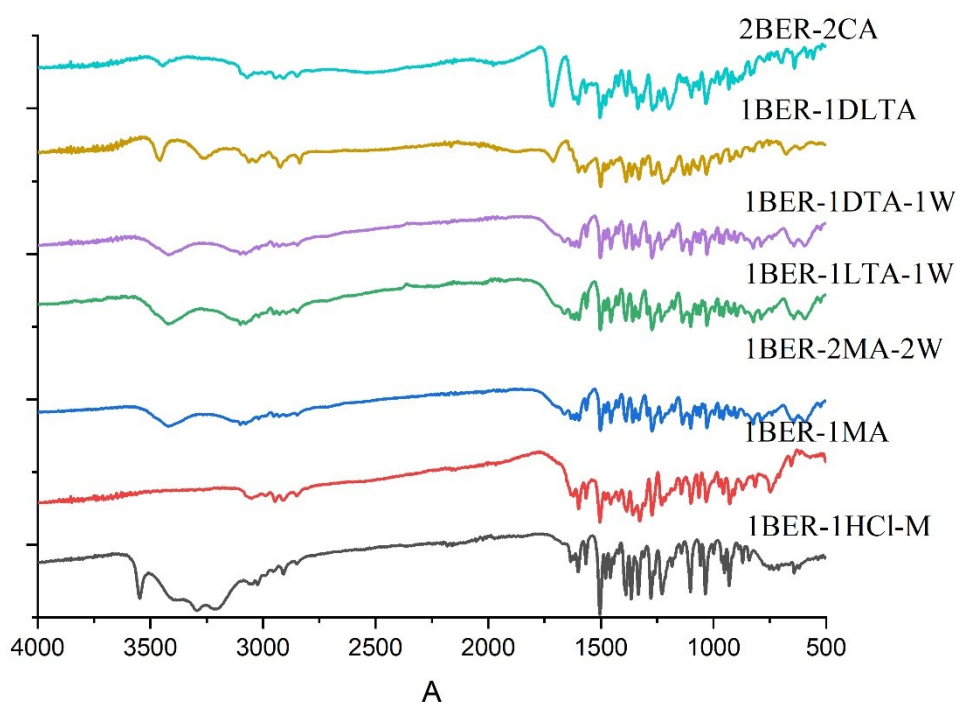
**Figure 16** FT-IR profiles of stability of 1BER-1DTA-1W



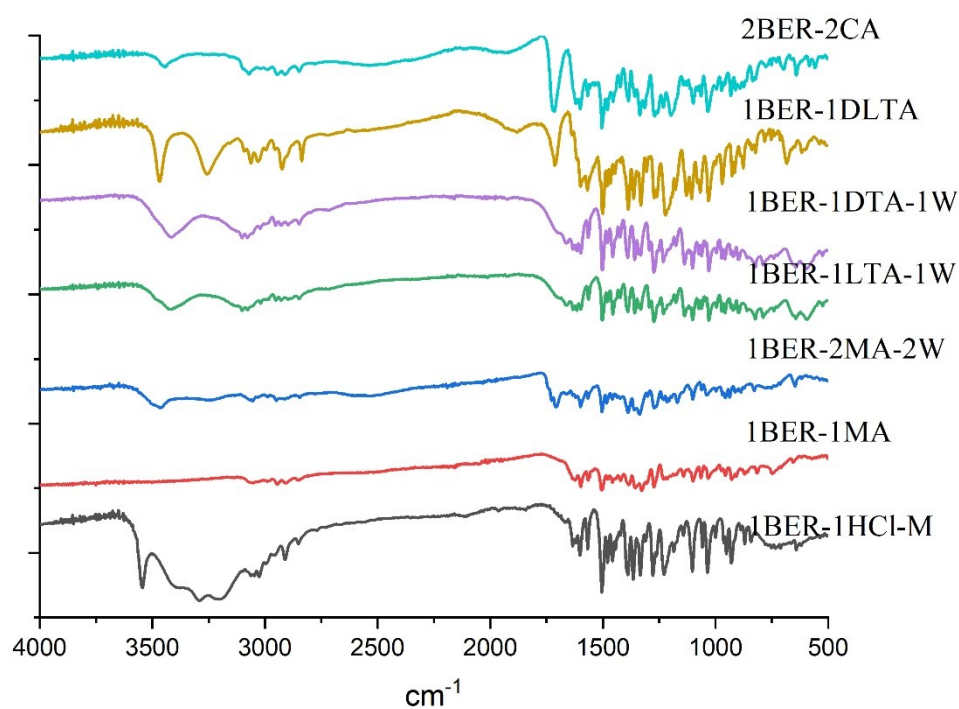
**Figure 17** FT-IR profiles of stability of 1BER-1DLTA



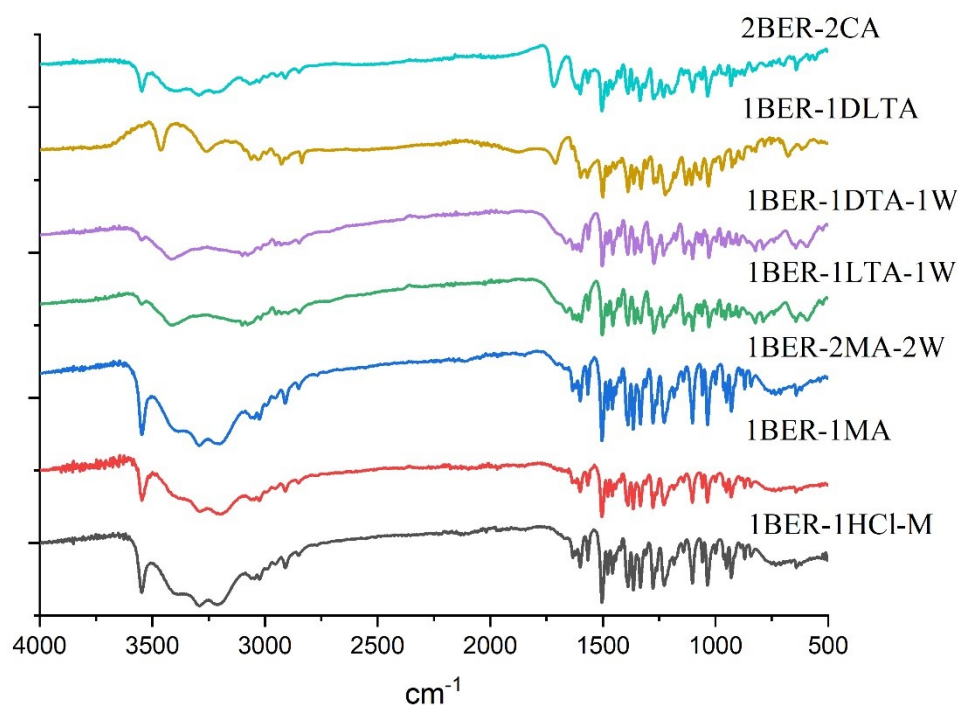
**Figure 18** FT-IR profiles of stability of 2BER-2CA



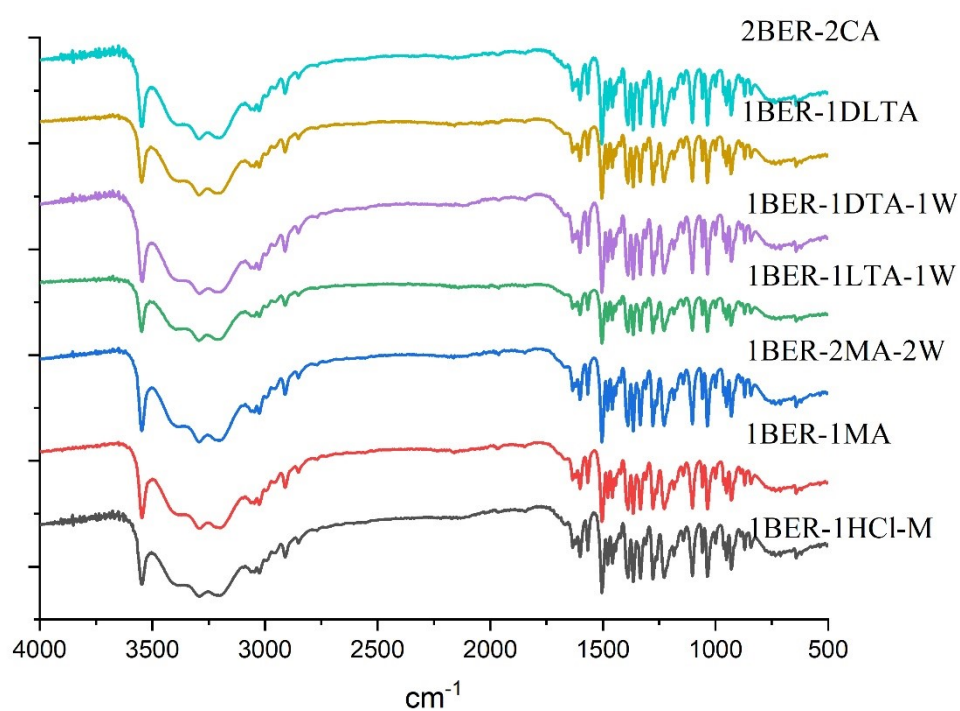
**Figure 19.** FT-IR profiles of the undissolved solid phase forms in pure water at 3 hours



**Figure 20.** FT-IR profiles of the undissolved solid phase forms in pure water at 48 hours



**Figure 21.** FT-IR profiles of the undissolved solid phase forms in dilute hydrochloric acid solution at 3 hours



**Figure 22.** FT-IR profiles of the undissolved solid phase forms in dilute hydrochloric acid solution at 48 hours