

SUPPLEMENTARY MATERIAL

**The solvation effect of C=O group of cyclic anhydrides in solution**

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Table S1. The correlation parameters between the frequencies of the C=O groups of alanine and sarcosine anhydride in solvents and the parameter  $S_{\nu W}$ .

Anhydrides	$a$	$b$	R	S <sub>D</sub>	N
Alanine anhydride	-3.00	1697.3	0.991	0.40	11
Sarcosine anhydride	-4.32	1688.7	0.992	0.54	11

Table S2. Parameters of correlation (R, correlation coefficient; S<sub>0</sub>, standard deviation) between the frequencies of the C=O groups in the complexes of alanine and sarcosine anhydride with methanol in aprotic solvents and the parameter  $S_{\nu W}$ .

Anhydrides	$a$	$b$	R	S <sub>D</sub>	N
Alanine anhydride	-2.58	1680.5	0.995	0.27	4
Sarcosine anhydride	-3.71	1676.2	0.999	0.12	4