Supporting information for

Preparation of N-containing chemical 3-acetamido-5-acetylfuran from N-acetylglucosamine and chitin using green deep eutectic solvent as the catalyst

Chaoqiang Wu[a], Chengyong Wang[a], Alei Zhang[a,b,*], Kequan Chen[a,*], Fei Cao[a], Pingkai Ouyang[a]

[a]*State Key Laboratory of Materials-Oriented Chemical Engineering, College of Biotechnology and Pharmaceutical Engineering, Nanjing Tech University, Nanjing 211816, China.*

[b]*Jiangsu Key Laboratory of Marine Bioresources and Environment, Jiangsu Ocean University, Lianyungang, 222005, China.*

*Corresponding author: Alei Zhang, Kequan Chen

E-mail address: zhangalei@njtech.edu.cn; kqchen@njtech.edu.cn

Table S1 Dissociation constant of HBDs in this article in aqueous solution (25 °C).

DES	Hydrogen bond donor[a]	pKa
CCCA	Citric acid monohydrate	3.13[a]
		4.76[b]
		6.40[c]
CCMA	Malonic acid	2.85[a]
		5.66[b]
CCML	D/L-malic acid	2.85[a]
		4.76[b]
CCSA	Succinic acid	4.20[a]
		5.63[b]
CCLA	Lactic acid	3.86[a]
CCUR	Urea	13.82[a]

[a] Primary dissociation constants, [b] Secondary dissociation constants, [c] Tertiary dissociation constant

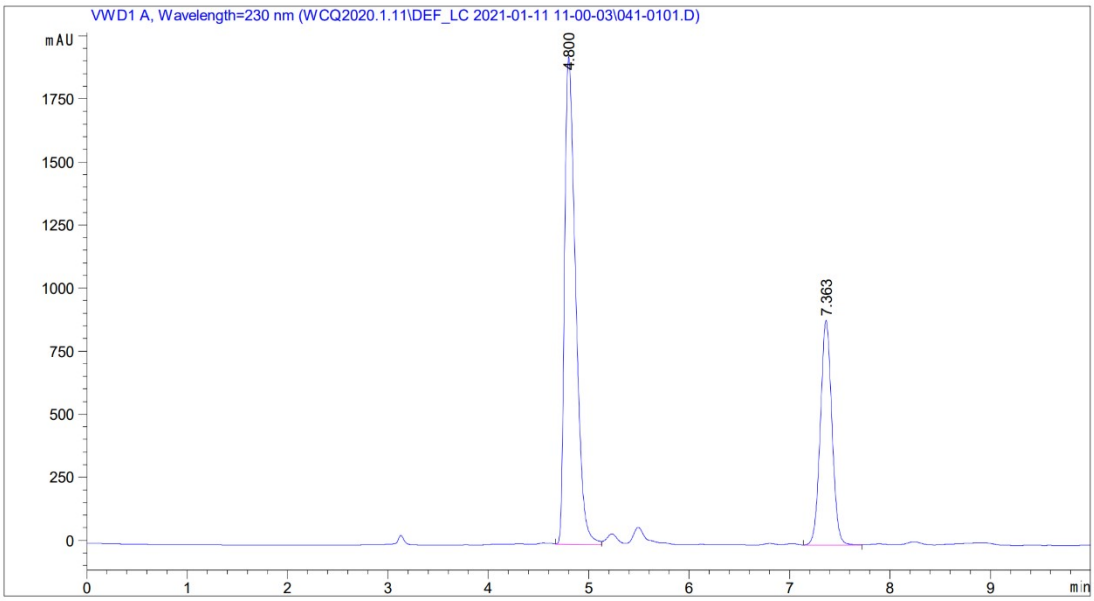

Fig. S1. HPLC spectra of the reaction mixture of 3A5AF

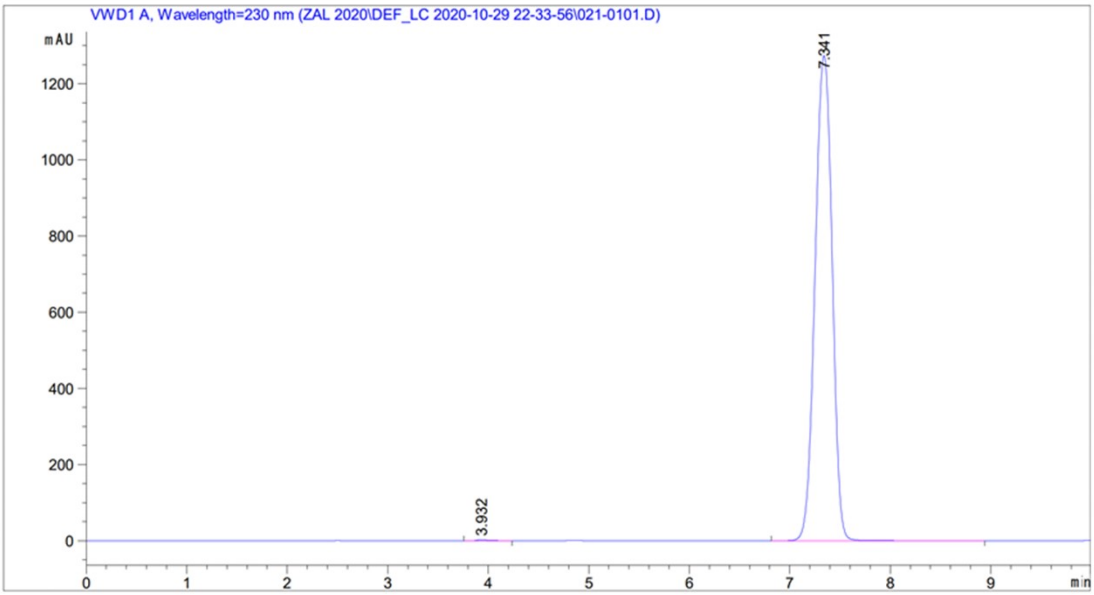

Fig. S2. HPLC spectra of purified 3A5AF.

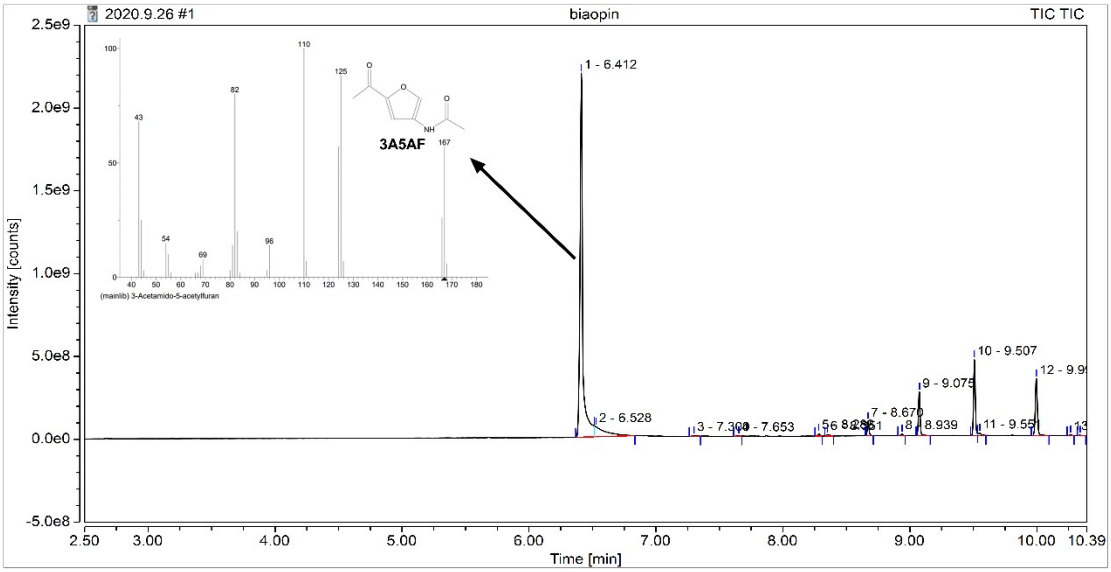

Fig. S3. The GC-MS analysis of production in Methanol.

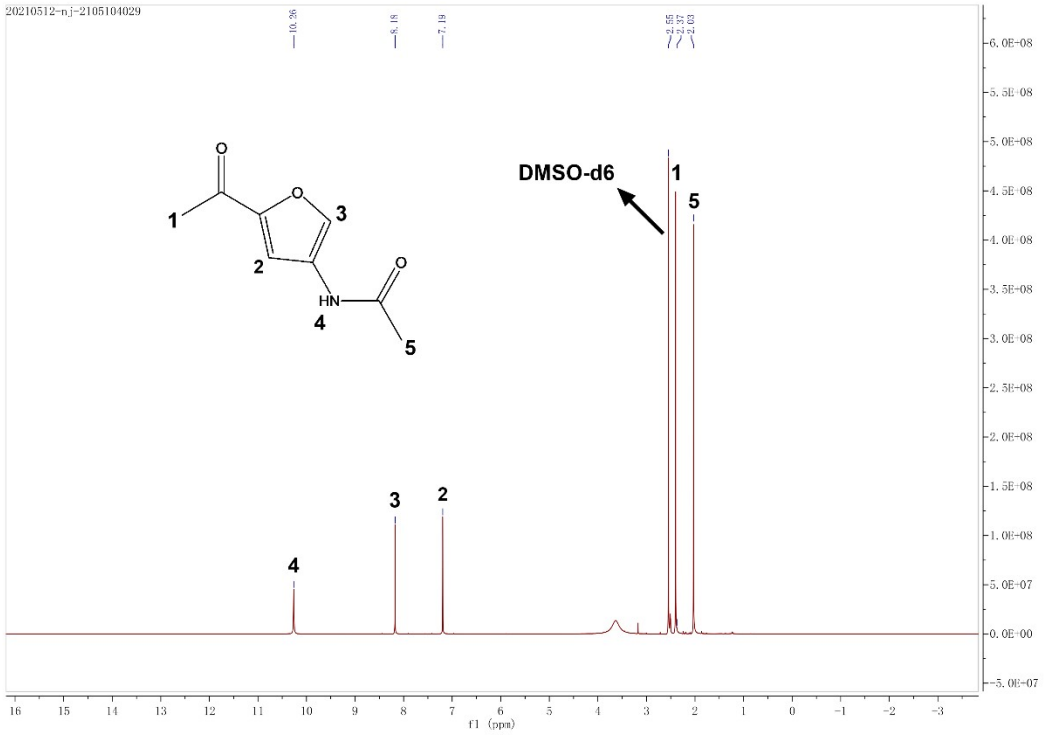

Fig. S4. ^{1}H-NMR spectra of isolated product 3A5AF in DMSO-d6.

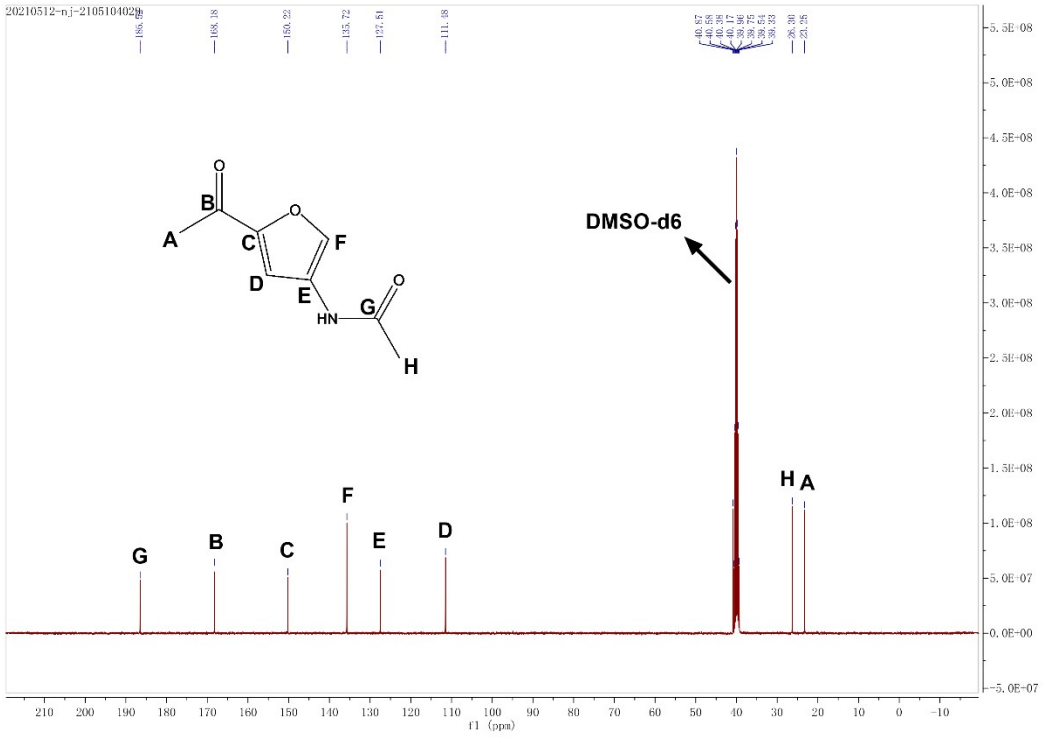

Fig. S5. ^{13}C-NMR spectra of isolated product 3A5AF in DMSO-d6.