

Screening the deep eutectic electrolytes for supercapacitors with alleviated self-discharge

Wenxia Huang, Xiaohui Yan, Yige Xiong, Qihui Guo, Xin Zhang, Fengyu Huang,
Houqiang Shi, Xiang Ge*

Department of Materials and Metallurgy, Guizhou University, Guiyang, Guizhou 550025,
China

*Corresponding Author

E-mail: xge@gzu.edu.cn

Table of content in the supporting data:

Table S1. Viscosity, conductivity and density of DESs

Figure S1. XRD pattern of the AC

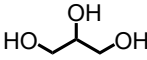
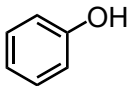
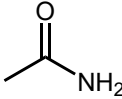
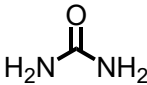
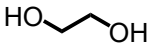
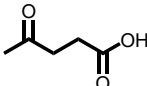
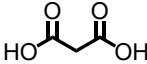
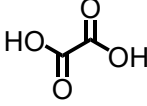
Figure S2. SEM and TEM images of the AC

Figure S3. N₂ adsorption/desorption profile and pore size distribution (PSD) curve of the AC

Figure S4. The CV curves at different scan rates of the symmetrical supercapacitors based on various DESs electrolytes.

Figure S5. The cycling and charge/discharge curves of the symmetrical supercapacitors based on DESs electrolytes.

Table S1. Viscosity, conductivity and density of DESs

HBD		ChCl:H BD (molar ratio)	Viscosity at 18°C (cP)	Density at 25°C (g/cm ³)	Conductivity at 25°C (μS/cm)	15h Voltage retention rate
	Glycerol (Gly)	1:2	290	1.180	1562	1
	Phenol	1:2	91	1.045	1264	2
	Acetamide (Ace)	1:2	Solid	1.007	Solid	3
	Urea	1:2	295	1.132	821	4
	EG	1:2	51	1.255	17368	5
	Levulinic acid (LA)	1:2	205	1.247	1034	6
	Malonic acid (MA)	1:2	Solid	1.358	320	7
	Oxalic acid (OA)	1:2	19945	1.211	118	8

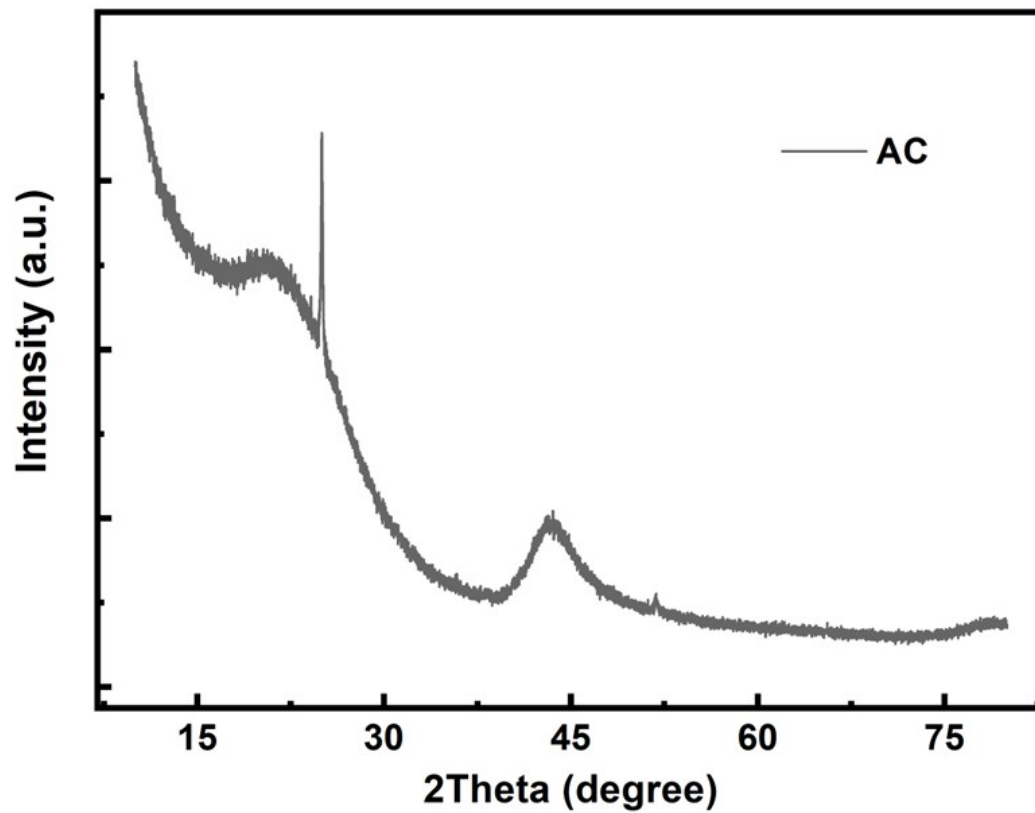


Figure S1. XRD pattern of the AC

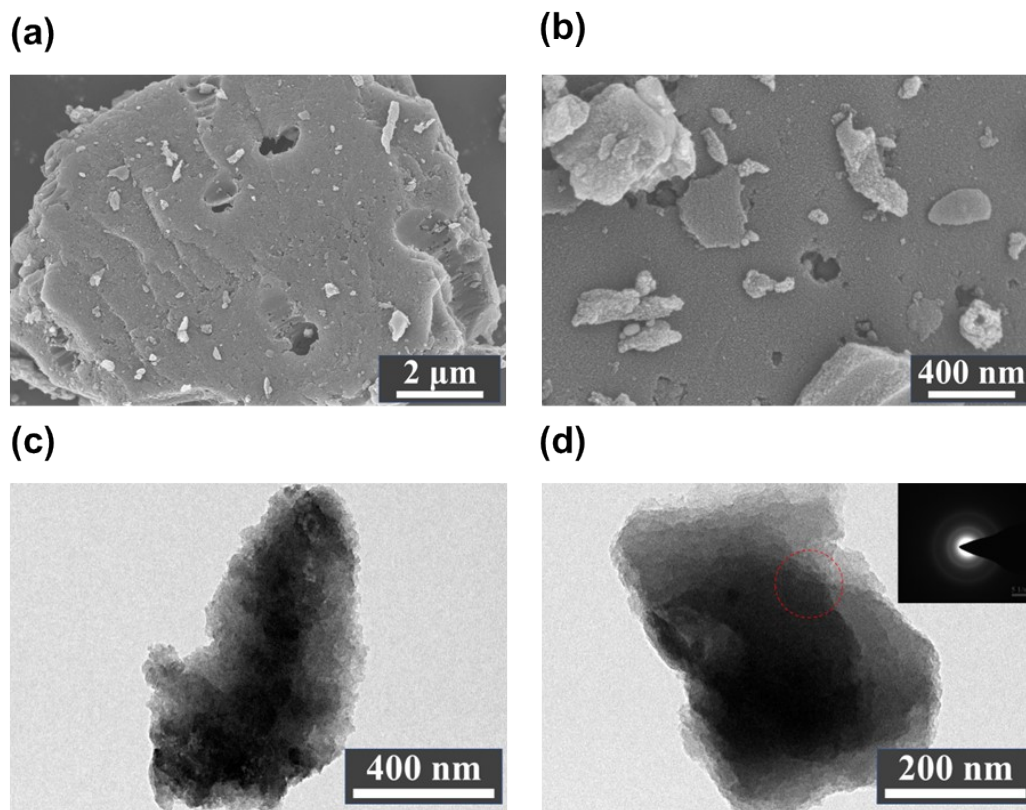


Figure S2. SEM and TEM images of the AC

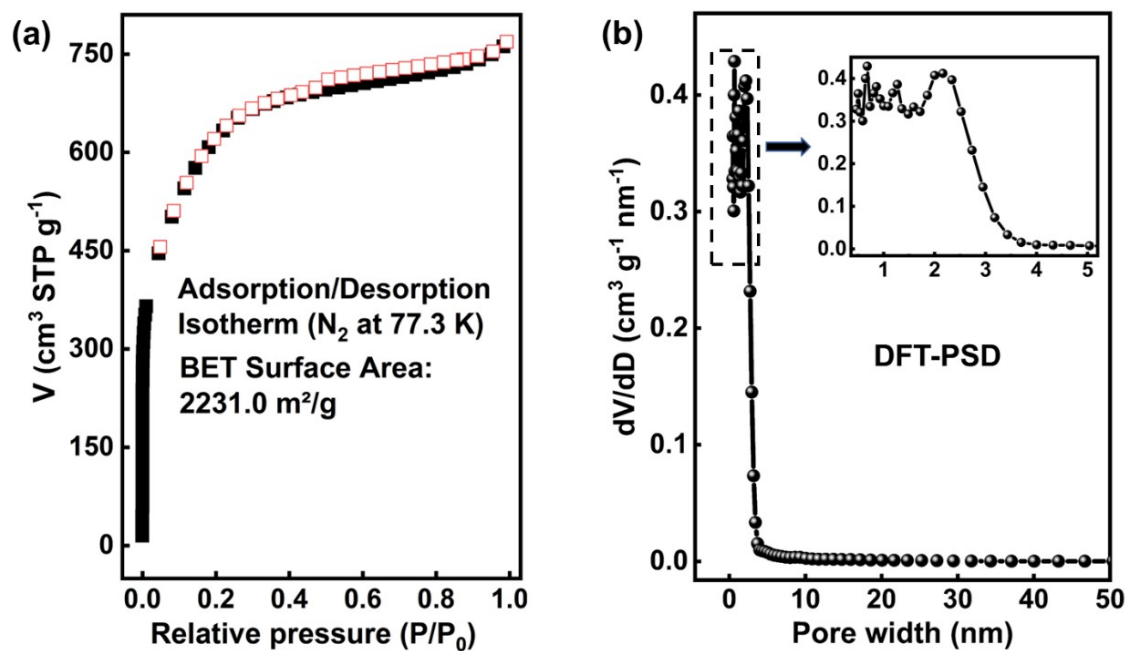


Figure S3. N_2 adsorption/desorption profile and pore size distribution (PSD) of the AC

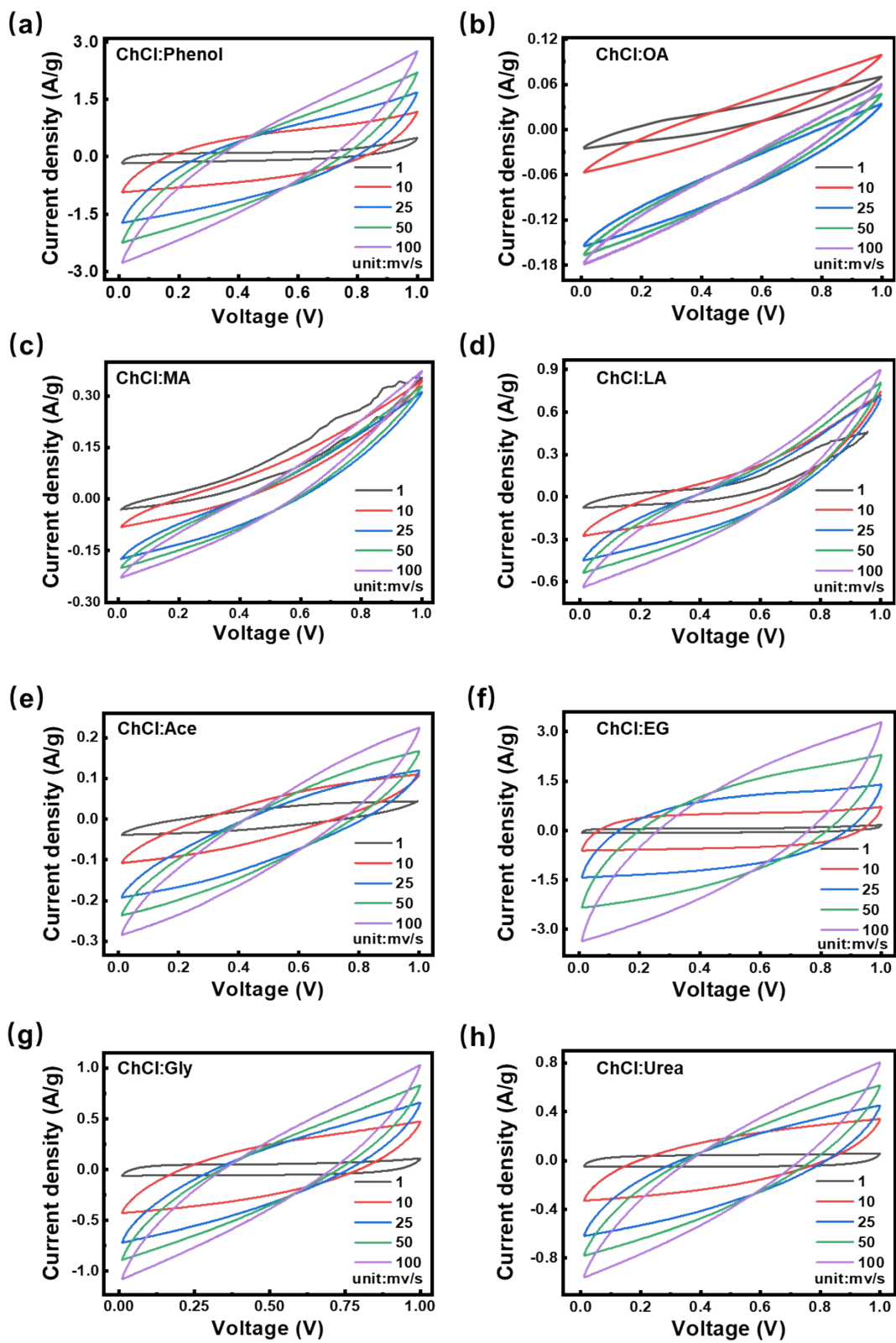


Figure S4. The CV curves at different scan rates of the symmetrical supercapacitors based on various DESs electrolytes.

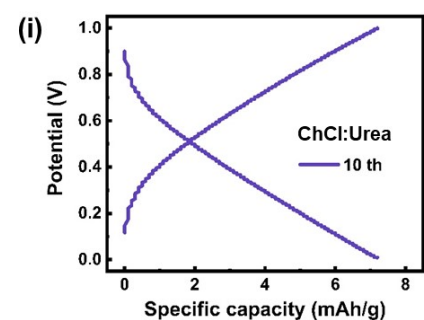
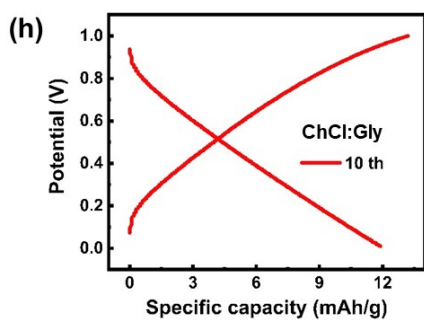
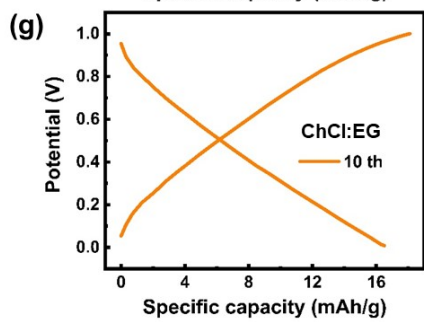
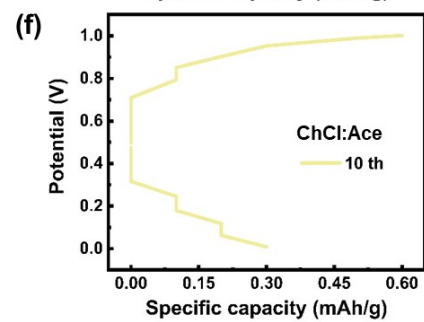
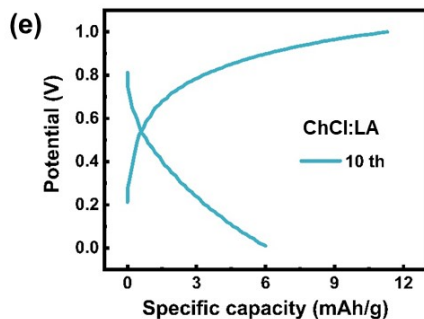
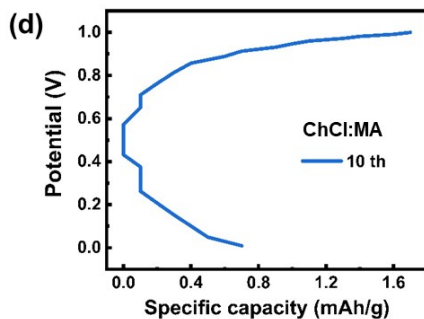
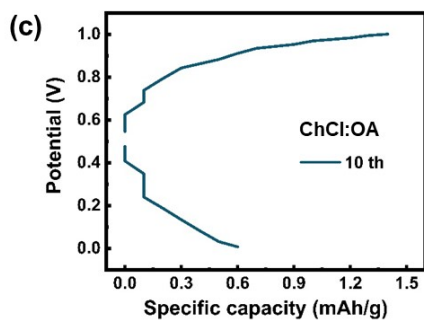
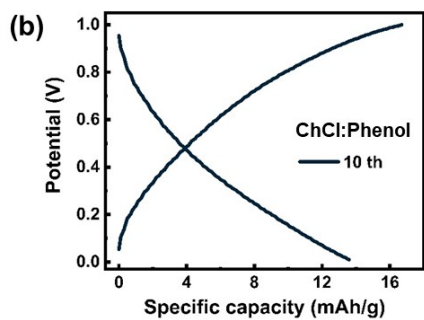
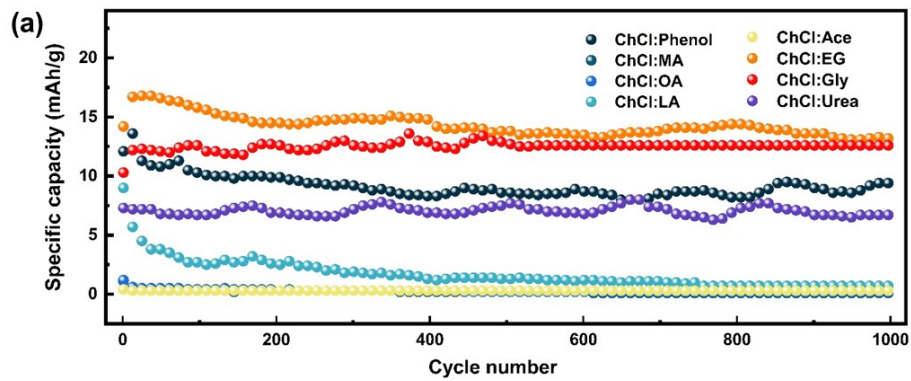


Figure S5. The cycling and charge/discharge curves of the symmetrical supercapacitors based on DESs electrolytes.