

Supporting Information

Directed molecular structure design of coordination polymers with different ligands for regulating output performance of triboelectric nanogenerators

Jiabin Xiong^{a,*}, Wenjie Wang^a, Huijun Du^a, Ziqing Zhou^a, Aiwei Zhao^a, Liwei Mi^{a,*} and Siru Chen^{a,*}

^a School of Material and Chemical Engineering, Center for Advanced Materials Research, Zhongyuan University of Technology, Zhengzhou, 450007, China ;

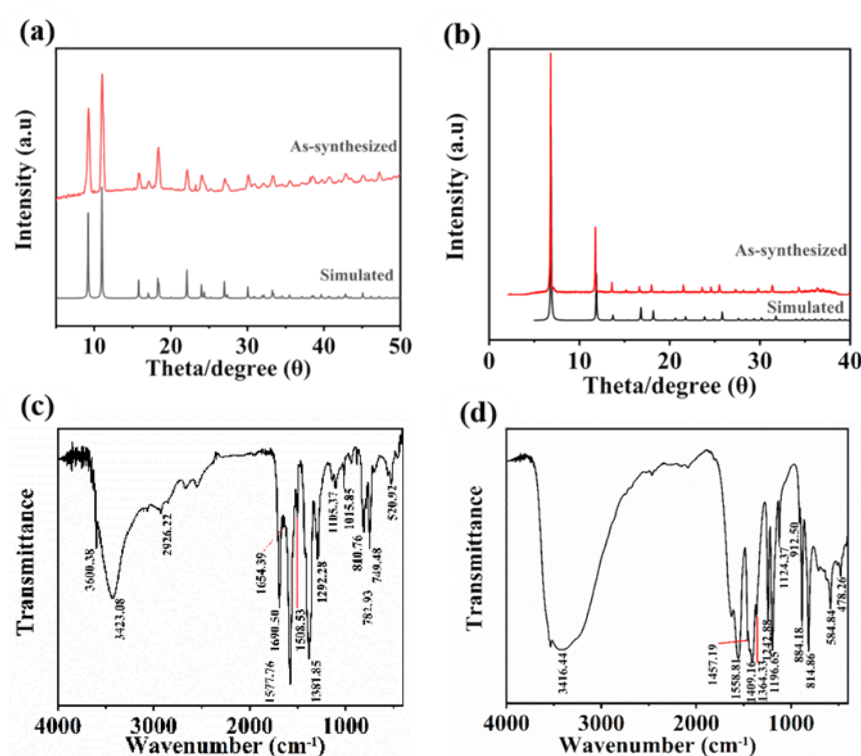


Figure. S1. Fitted spectra of tested and simulated PXRD characterization of compounds (a) **1** and (b) **2**; (c-d) FT-IR spectra of compounds **1-2**.

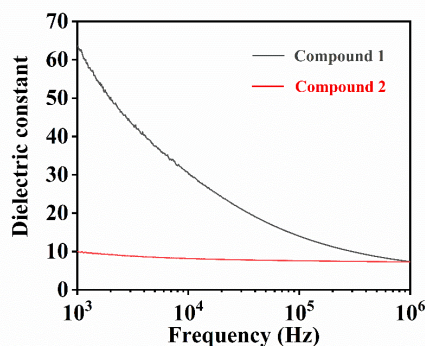


Figure. S2. Dielectric constant of compounds **1** and **2**.

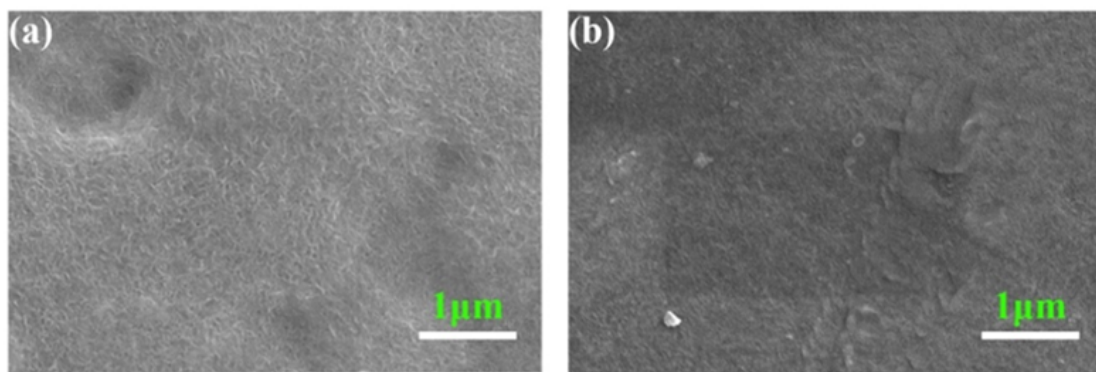


Figure. S3. (a) Scanning electron microscopy (SEM) image of polyvinylidene fluoride before TENG testing; (b) SEM image of polyvinylidene fluoride after TENG testing.

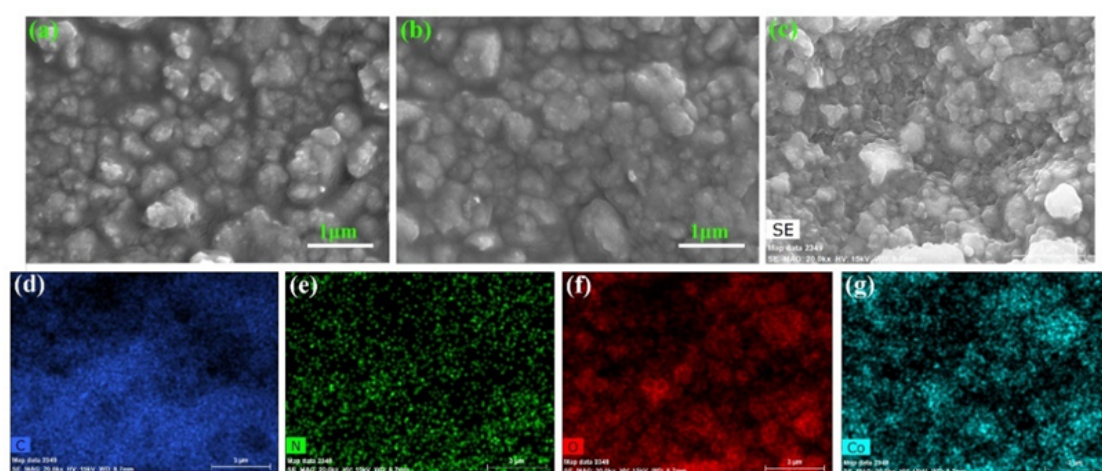


Figure. S4.(a) Scanning electron microscopy (SEM) images of powdered compound **1** before testing (a), after testing (b), and energy dispersive spectroscopyEDS-mapping of individual elements in compound **1** (c - g).

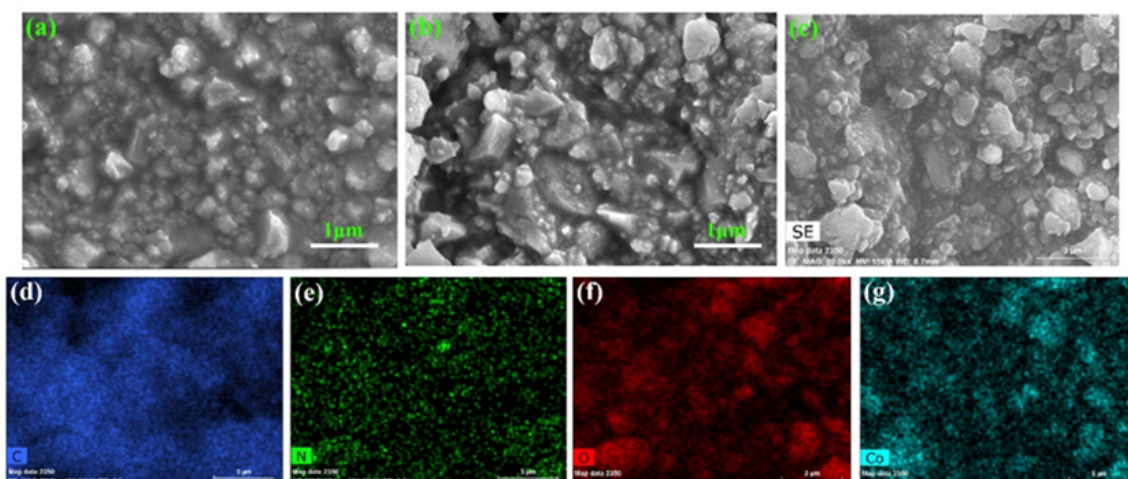


Figure. S5. Scanning electron microscopy images of powdered compound **2** before testing (a), after testing (b), and energy dispersive spectroscopy EDS-mapping of individual elements in compound **2** (c-g).

Reference	I_{sc} (μA)	V_o (V)
CrystEng Comm 23 (2021) 5184 - 5189	34.8	395
Chem.Eur.J. 26 (2020) 5784 - 5788	43.6	416
Chem.Eur.J. 26 (2020) 584 - 591.	98.6	1180
This work	76.46	522.97

Figure S6. Output performance comparison table.

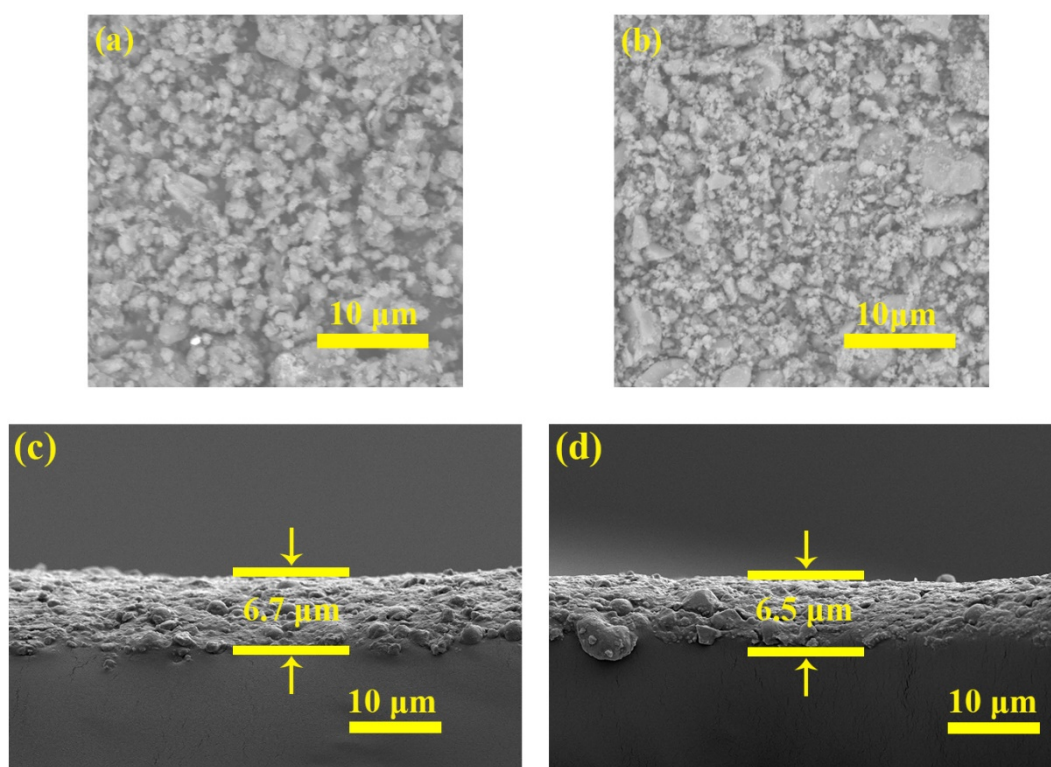


Figure S7 SEM Diagram of Particle Size and Coating Thickness

Note 1: The particle size and coating thickness will affect the performance of TENG. The smaller the particle size, the larger the specific surface area, and the higher the output performance of the device due to the friction contact area. The thickness of the film will also affect the voltage of the two friction electrodes, so the electrodes shall be prepared as consistent as possible by grinding and coating.