

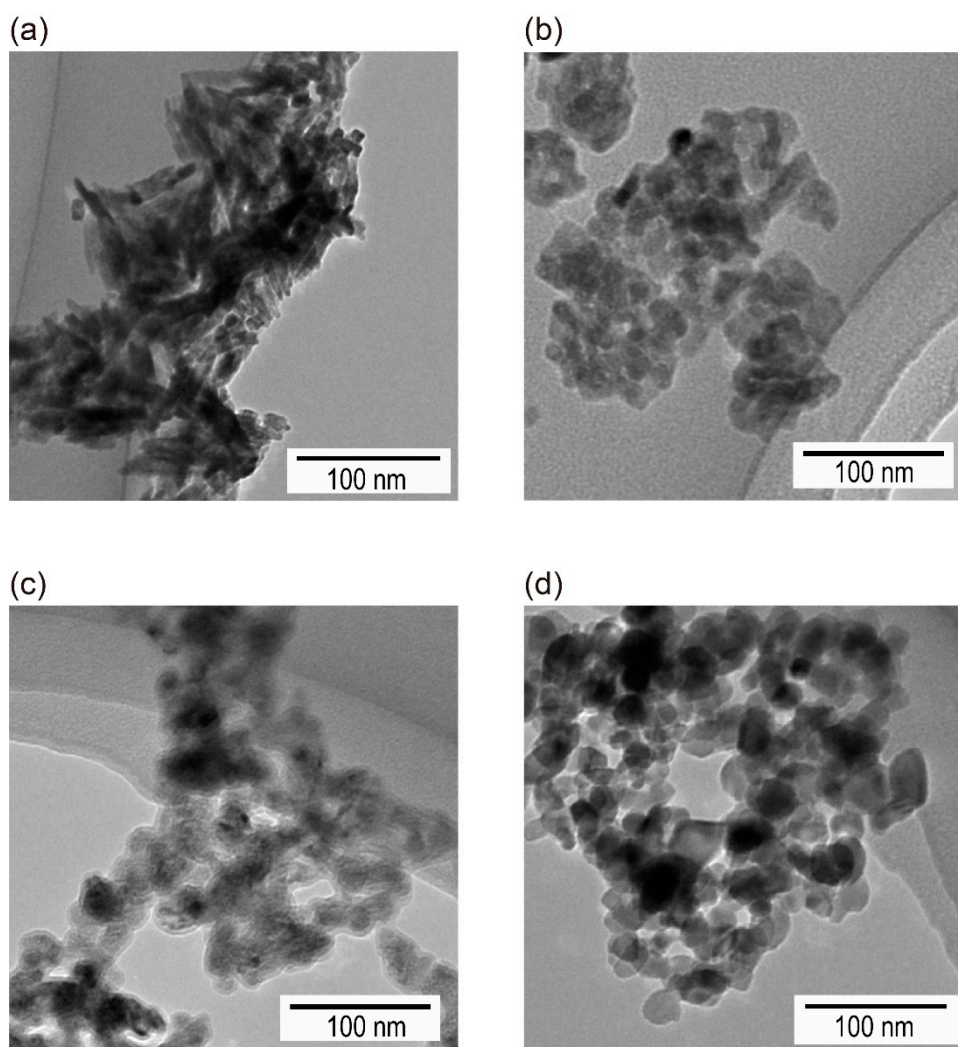
## Supplementary Materials

### Triboelectric Charging Behaviors of Polyester Films Doped with Titanium Dioxide Nanoparticles of Various Crystal Structures

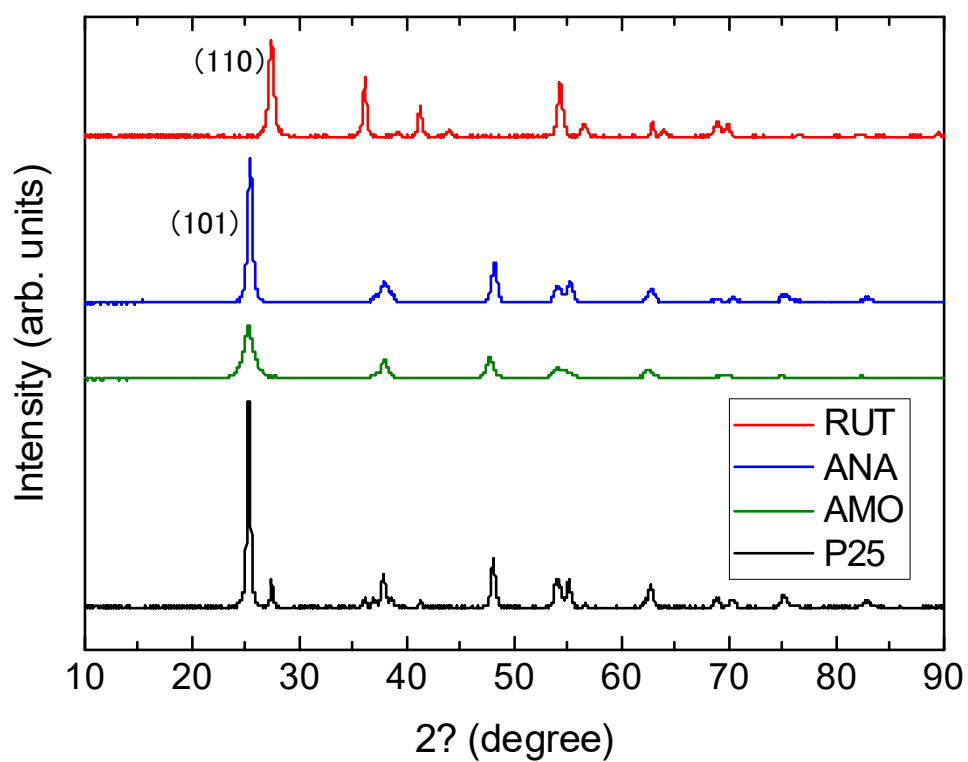
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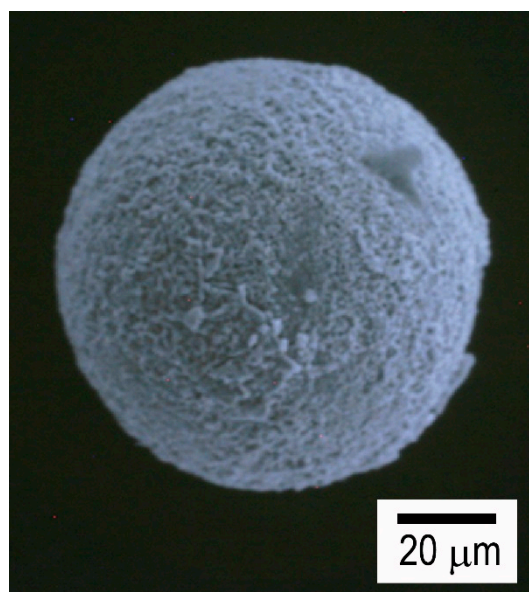
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**Figure S1.** TEM images of RUT (a), ANA (b), AMO (c), and P25 (d) TiO<sub>2</sub> nanoparticles.



**Figure S2.** X-ray diffraction patterns of RUT, ANA, AMO, and P25 TiO<sub>2</sub> nanoparticles.



**Figure S3.** SEM image of an iron particle used as the friction counterpart for films.

**Table S1.** Relative permittivity value,  $\epsilon$ , of TiO<sub>2</sub> doped PES film.

Doping level (wt%)	$\epsilon$			
	RUT	ANA	AMO	P25
0	3.4	3.4	3.4	3.4
5	4.9	4.0	3.8	3.9
10	4.8	4.6	5.1	8.7

**Table S2.** Electrical resistivity value,  $\rho$ , of TiO<sub>2</sub> doped PES film.

Doping level (wt%)	$10^{-4} \rho (\Omega \text{ sq}^{-1})$			
	RUT	ANA	AMO	P25
0	1.3	1.3	1.3	1.3
1	1.4	0.97	1.2	1.2
5	2.0	1.1	1.2	1.1
10	1.3	2.6	1.9	0.76