Supporting Information

Transparent flexible electromagnetic interference shielding film using ITO nano-branches by internal scattering

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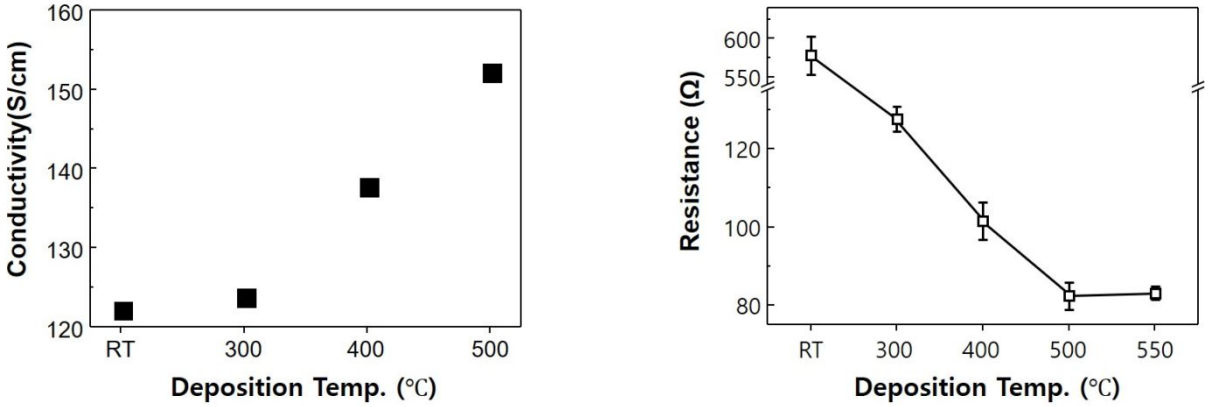

Figure S1. Electrical conductivity and resistance of ITO nano-branches grown on glass according to substrate temperature.

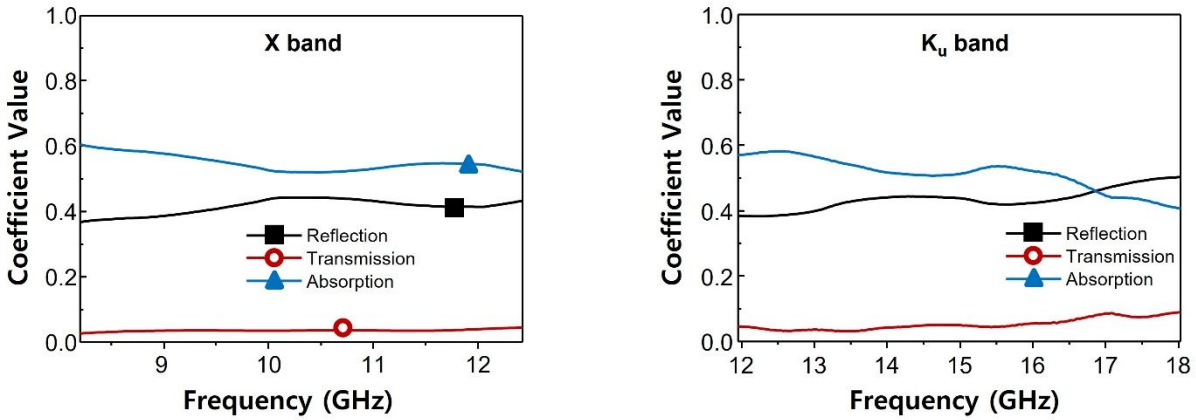

Figure S2. Transmission, Absorption and Reflection Coefficient of ITO nano-branch on polyimide (X band and K_u band response).

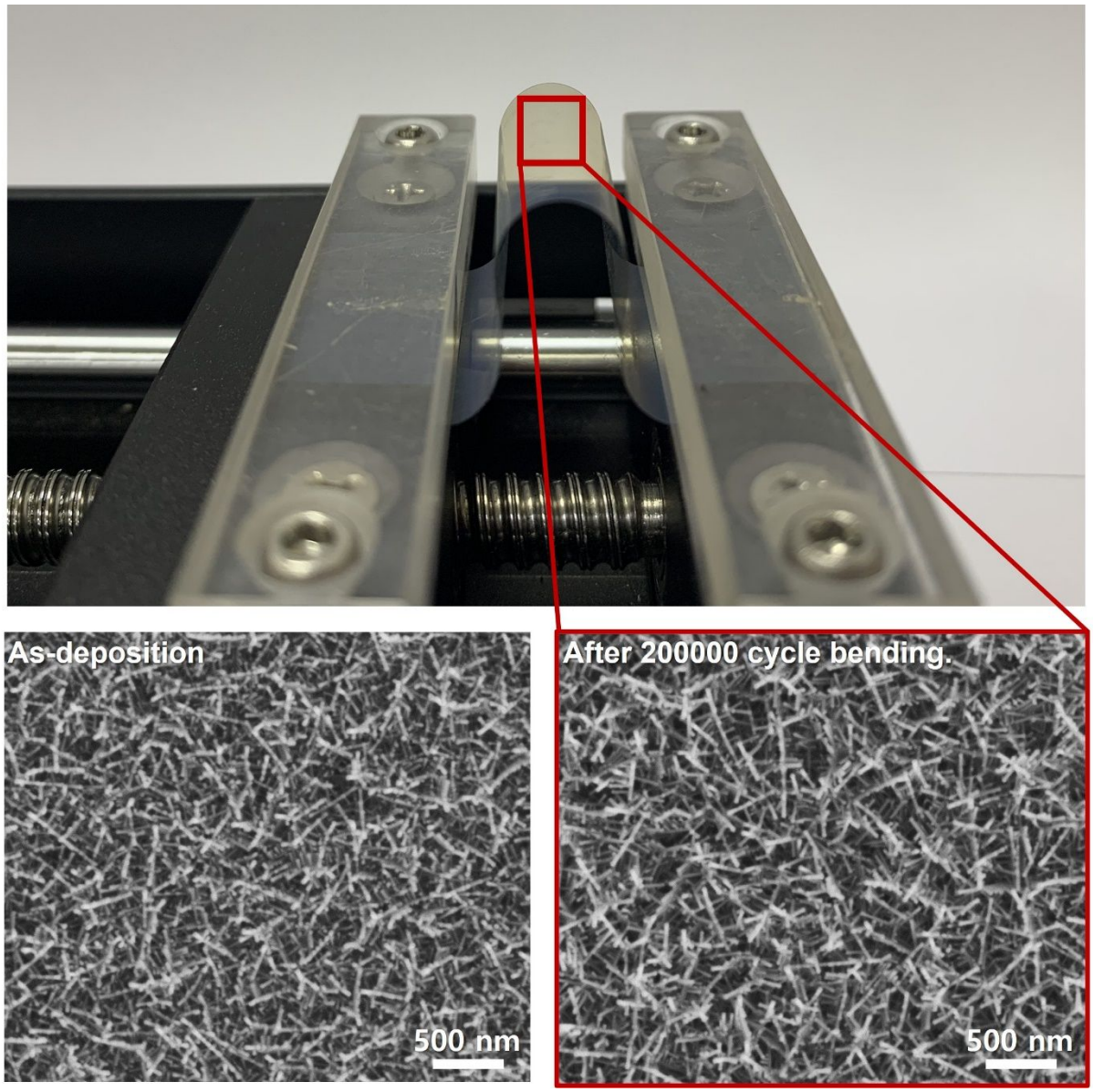

Figure S3. Top view SEM image of ITO nano-branches growth on polyimide at 400 ^{o}C before and after 200000 bending.

Table S1. the resistance changes of TF-EMIS film by ITO nano-branches on Polyimide film and commercial ITO coated PET film

	As-position	After 200000 cycle bending	$(R-R_0)/R_0$
TF-EMIS film by ITO nano-branch on PI film	144.23 Ω	162.51 Ω	0.13

	As-position	After 10000 cycle bending	$(R-R_0)/R_0$
Commercial ITO coated PET film	2.34 kΩ	10.18 kΩ	3.39

Supporting information movies; i) experimental process ii) Wi-fi test, and iii) LTE test