Supplementary Information (SI) for RSC Applied Polymers.
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Supporting Information

Self-Limiting Electrospray Deposition (SLED) of Polyimide Nanoparticle Coatings as Effective Battery Separator Membranes

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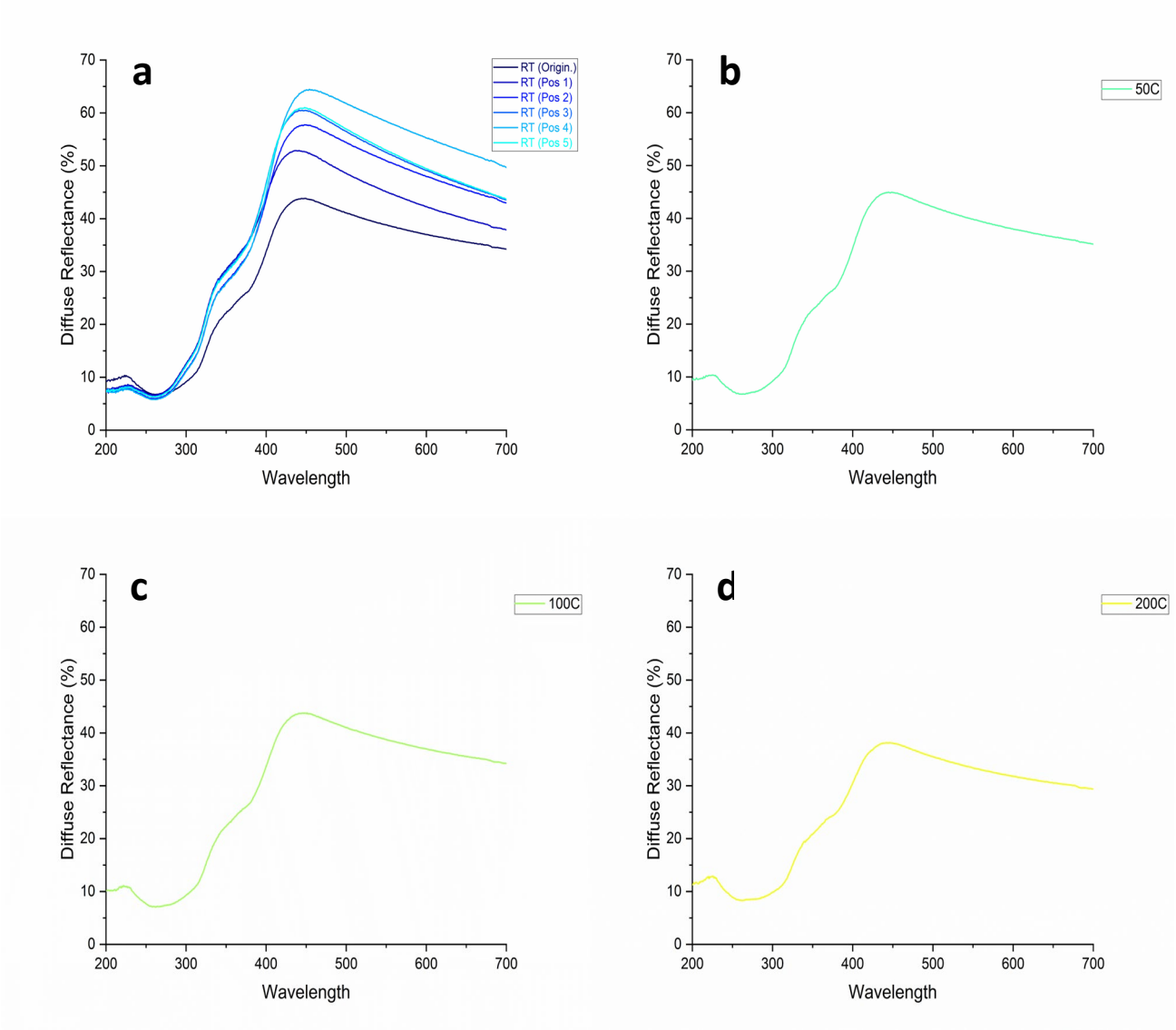

Figure S1(a-d). UV vis scattering plot of SLED PI film on Si wafer annealed at (a) room temperature (~23ºC) (b) 50ºC (c) 100ºC (d) 200ºC.

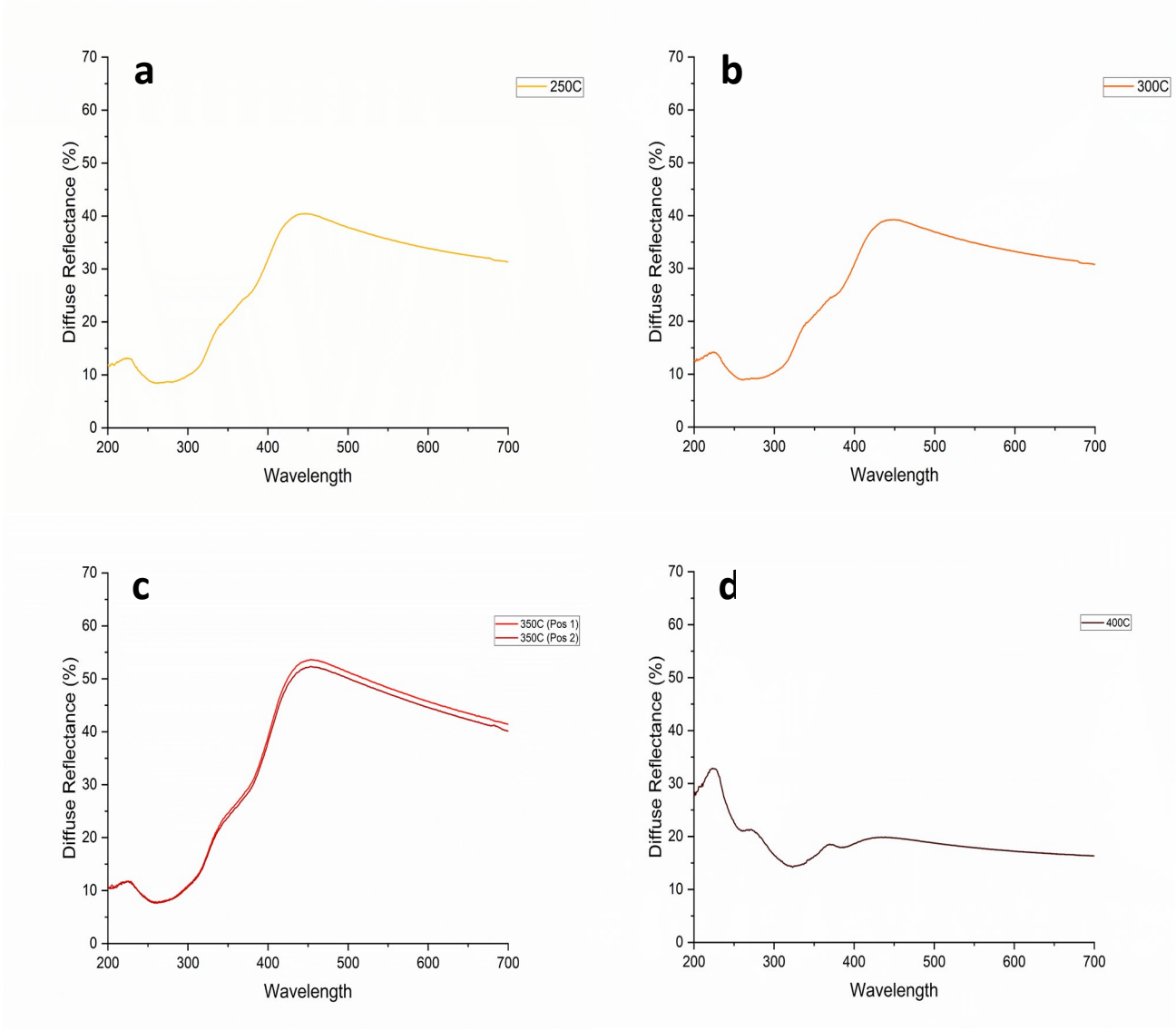

Figure S2(a-d). UV vis scattering plot of SLED PI film on Si wafer annealed at (a) 250ºC) (b) 300ºC (c) 350ºC (d) 400ºC.

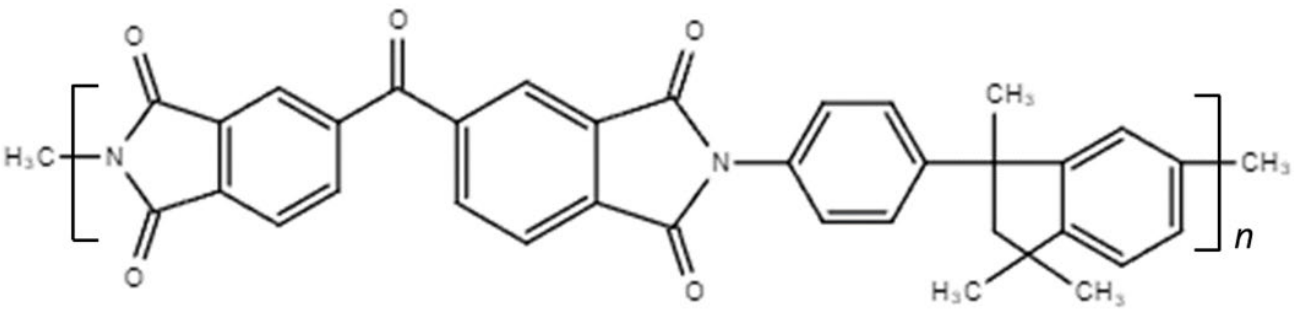

Figure S3. Matrimid 5218 molecular structure.

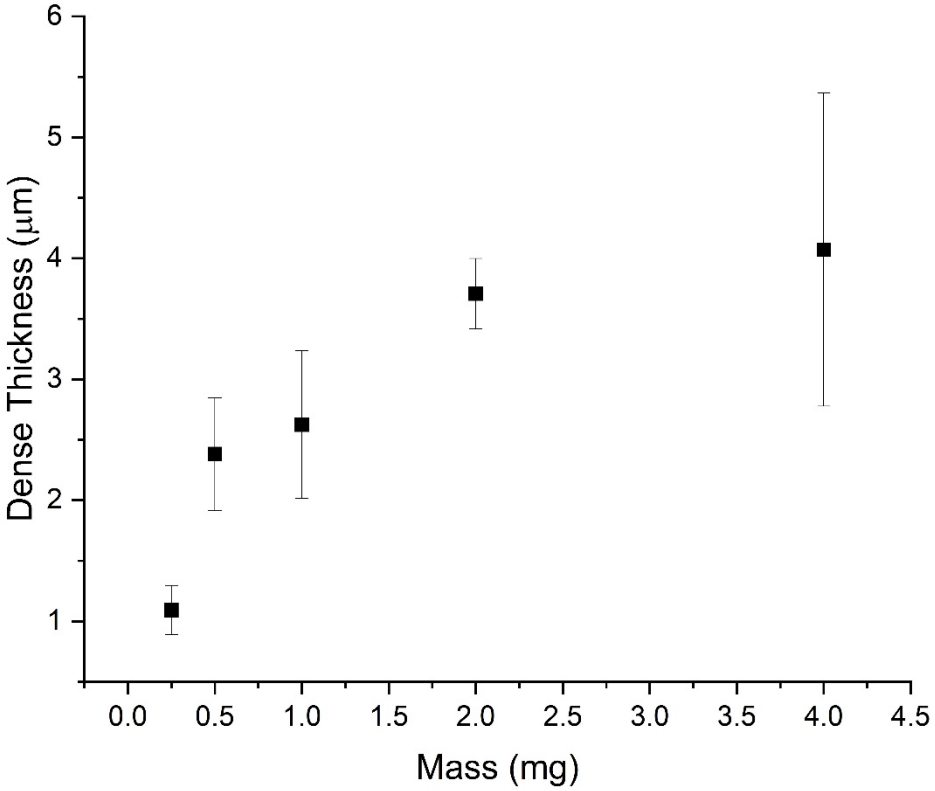

Figure S4. PI mass series showing dense thickness plotted against mass highlighting the self-limiting behavior of Matrimid 5218. These samples were sprayed at 0.2 mL/h at a concentration of 0.2 wt.% PI in 2:1 DCE:Chloroform to obtain the respective electrosprayed mass. Each spray was conducted in a low humidity dry box between 15-20% relative humidity and a temperature range of 20-25^{o}C.