

Supporting Information

Colloidal self-assembly of soft neural interfaces from injectable photovoltaic microdevices

Haiyan Jia*, Zhangjun Huang, Murat Kaynak, and Mahmut Selman Sakar*

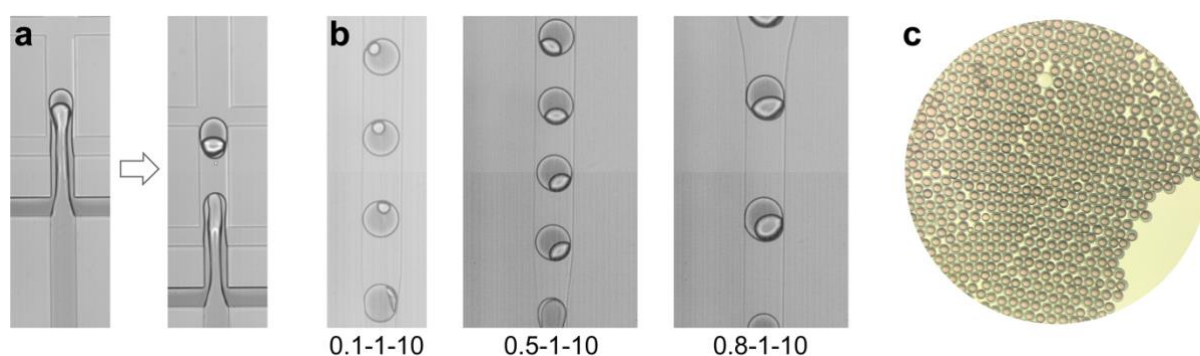


Figure S1. Setting flow parameters for the three phases to fabricate core-shell droplets. a) Microfluidic jetting to ensure repeatable encapsulation of the inner TPETA phase within PEDOT:PSS phase. b) Increasing the flow rate of the inner phase while keeping the other two constant increases the diameter of the TPETA core. c) High-throughput formation of monodisperse core-shell droplets.

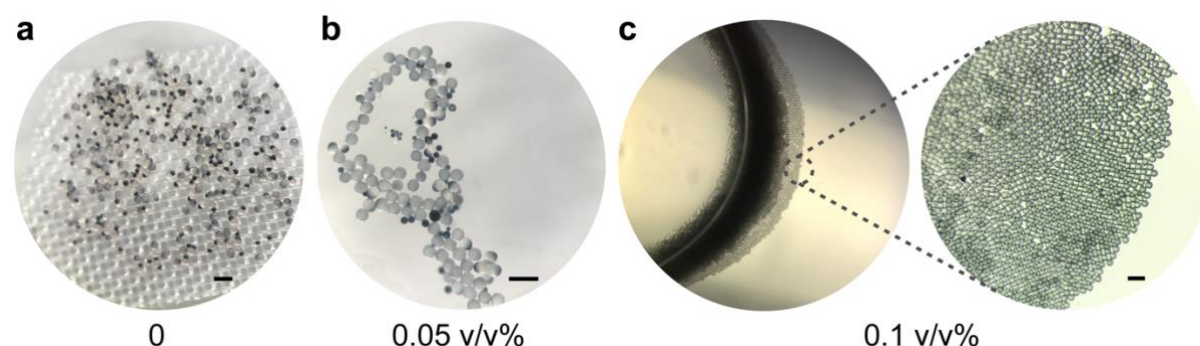


Figure S2. Generating uniform and durable PEDOT:PSS films around PTPETA particles. a) Fabrication without GOPS supplement. Janus particles are formed. b) Adding GOPS improves the distribution of coating. c) Optimal results are obtained at 0.1% (v/v) concentration.

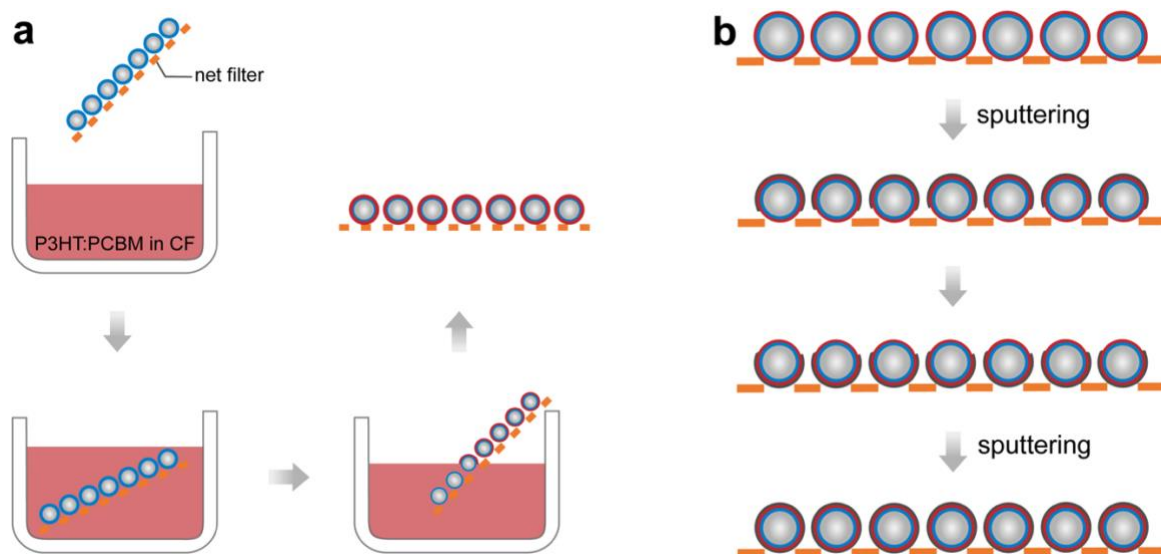


Figure S3. Deposition of the photovoltaic film and Ti electrode. a) Schematic illustration of the dip coating process for P3HT:PCBM around the PTPETA particles coated with PEDOT:PSS. b) Schematic illustration of the final metal (Ti) sputtering process.

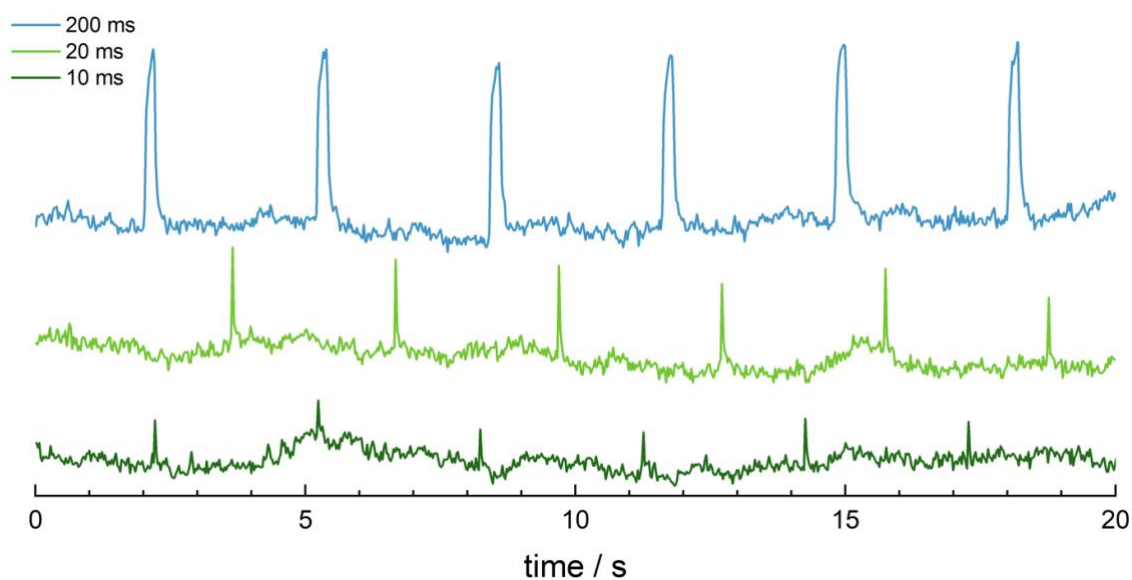


Figure S4. Photovoltaic response of a PVM measured for different pulse duration at a power intensity of 0.175 mW mm^{-2} .

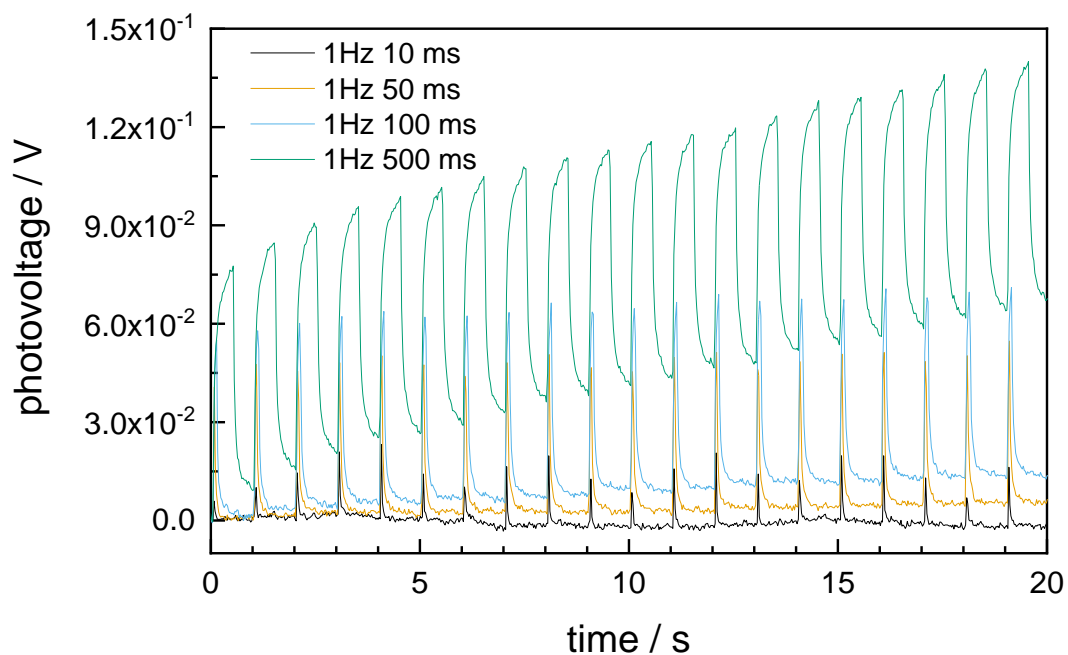


Figure S5. Representative PV recording of a PVM at 1 Hz with varying pulse durations at a power intensity of 0.67 mW mm^{-2} .

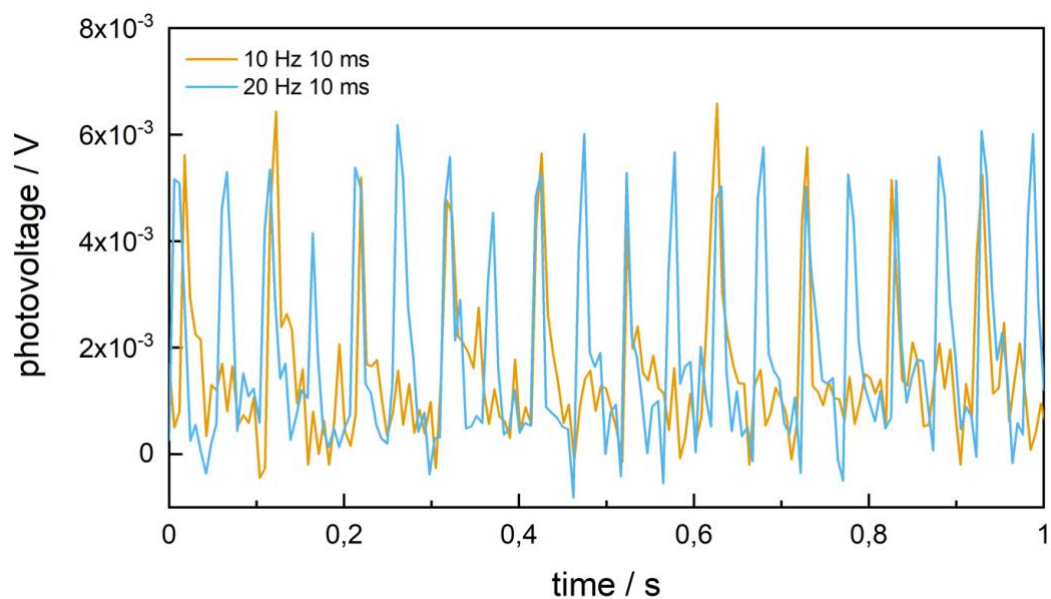


Figure S6. Representative PV recording of a PVM at 10 and 20 Hz with 10 ms pulses at a power intensity of 0.175 mW mm^{-2} .

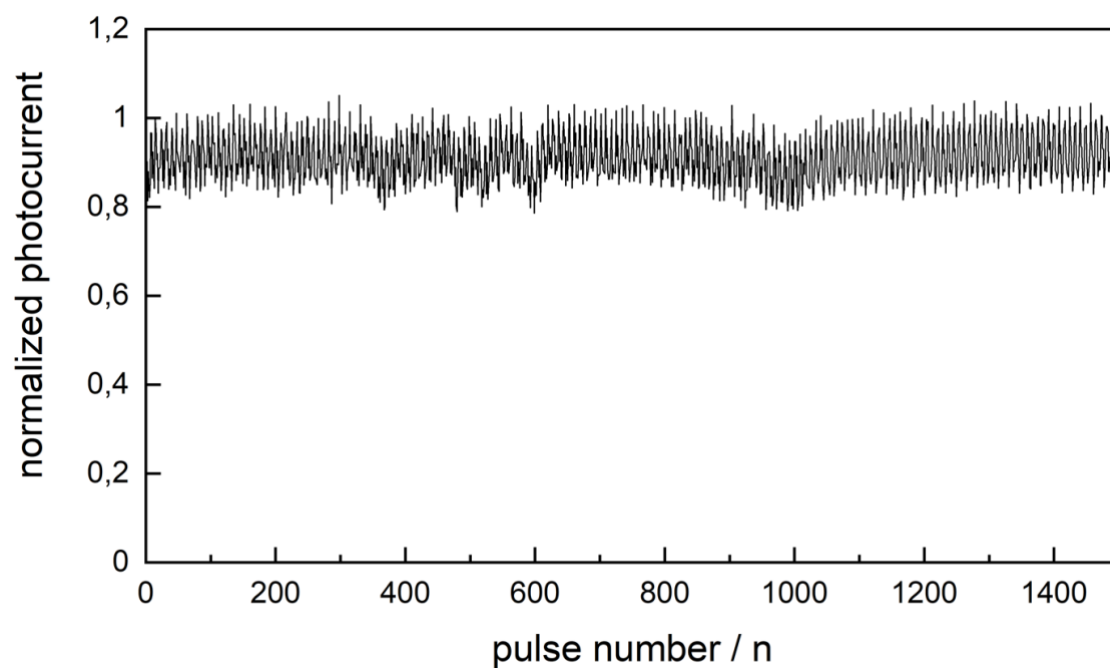


Figure S7. PC of a representative PVM over 1500 pulses at 10 Hz with 10 ms pulses for 0.175 mW mm^{-2} power intensity.