Abstract Submitted
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Plasma-assisted inkjet printing of poly(3,4-ethylenedioxythiophene) from 3,4-ethylenedioxythiophene stock solution[1] KAISHU NITTA, MASANAO TSUMAKI, TOMOYA KAWANO, KAZUO TERASHIMA, TSUYOHITO ITO, The University of Tokyo, TERASHIMA-ITO LAB TEAM — In recent decades, printing technologies, such as screen, gravure, and inkjet printing, have markedly progressed and have been applied to manufacture various printed devices [1]. Here, the simultaneous polymerization of 3,4-ethylenedioxythiophene (EDOT) monomer stock solution ink and printing of the resulting poly(3,4-ethylenedioxythiophene) (PEDOT) via plasma-assisted inkjet printing is demonstrated in an open air environment [2]. The plasma-induced polymerization of EDOT is confirmed by the spectroscopic measurements of the printed line. Furthermore, we also achieve plasma-induced polymerization of EDOT with poly(styrenesulfonate) (PSS) for the synthesis of an electrically conductive film from EDOT. The electrical conductivity of the fabricated films depend on the mixing ratio and plasma irradiation time. The details will be presented at the conference. [1] Y. S. Rim, *et al.*, *Adv. Mater.* **28** (2016) 4415 [2] K. Nitta, *et al.*, *J. Phys. D: Appl. Phys.* **52** (2019) 315202

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