

Electrochemical in battery polymerization of poly(alkylenedioxythiophene) over lithium iron phosphate for high-performance cathodes

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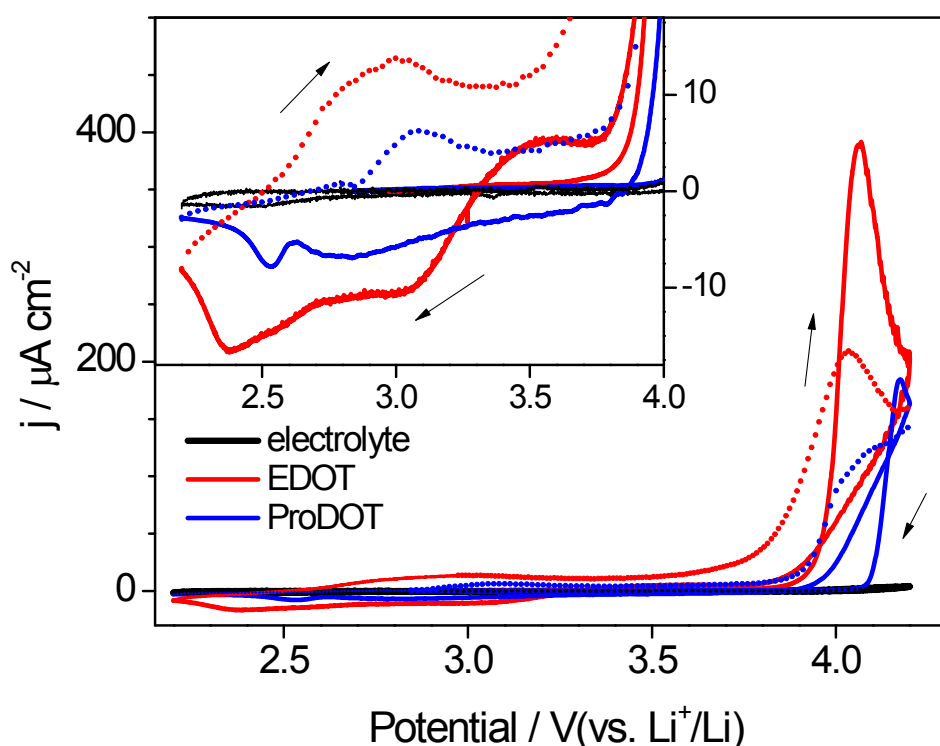


Figure S1. Cyclic voltammogram for the blank electrolyte and the EDOT and ProDOT in electrolyte solution (20 mM). The second forward scan is depicted with dotted lines.

Table S1. Results from the fitting of the experimental Mössbauer spectra showed in Figure 4.

Sample	Monomer	Assignment	IS [mm/s]	QS [mm/s]	LW [mm/s]	Contribution [%]
Pristine LFP	No	Fe ²⁺	1.220(1)	2.96(1)	0.275(2)	94(1)
		Fe ₂ P	0.47(2)	0.74(2)	0.31(3)	6(1)
Charged at 3.7 V	No	Fe ²⁺	1.30(2)	2.81(3)	0.33(4)	16(4)
		Fe ³⁺	0.442(2)	1.514(6)	0.264(5)	84(4)
Charged at 3.7 V	EDOT	Fe ²⁺	1.39(3)	2.56(4)	0.32(7)	9(6)
		Fe ³⁺	0.432(2)	1.518(6)	0.268(5)	91(6)
Charged at 4.2 V	EDOT	Fe ³⁺	0.435(3)	1.542(5)	0.337(9)	100
Discharged at 2.2 V	EDOT	Fe ²⁺	1.220(2)	2.96(1)	0.266(6)	100

*IS = Isomer Shift, QS= Quadrupole Splitting and LW = Line Width.