

Naphthalenediimide-Based Copolymers Incorporating Vinyl-Linkages for High-Performance Ambipolar Field-Effect Transistors and Complementary-Like Inverters under Air

Huajie Chen, Yunlong Guo, Zupan Mao, Gui Yu,* Jianyao Huang, Yan Zhao, and Yunqi Liu*

Chem. Mater. 2013, 25, 3589-3596. DOI: 10.1021/cm401130n

On page 3593, Table 2, for the p-channel mobilities of TGBC FETs, the standard deviations of the NVT-8 and PVT-10 based FETs were reported incorrectly. The right values should be ± 0.03 . For TGBC FETs based on P(NDI2OD-T2), PMMA with a weight-average molecular weight of 120 kDa was used as a gate dielectric. However, for TGBC FETs based on PNVT-8 or PNVT-10, PMMA with a weight-average molecular weight of 996 kDa was used as a gate dielectric. The corrected Table 2 is shown here.

Table 2. Performance Parameters of the FET Devices Based on Three NDI-Based Polymers with Different Devices Configurations

	n-channel			p-channel		
polymer	$\mu_{\rm e,avg} [{\rm cm}^2 {\rm V}^{-1} {\rm s}^{-1}]$	$\mu_{\rm e,max} [{\rm cm^2 V^{-1} s^{-1}}]$	$I_{\rm on}/I_{\rm off}$	$\mu_{\rm h,avg} \ [{\rm cm^2 \ V^{-1} \ s^{-1}}]$	$\mu_{\rm h,max} [{\rm cm}^2 {\rm V}^{-1} {\rm s}^{-1}]$	$I_{\rm on}/I_{\rm off}$
P(NDI2OD-T2) ^a	0.18 (±0.01)	0.19	$>1 \times 10^5$	NA	NA	NA
PNVT-8 ^a	$0.70 (\pm 0.05)$	0.78	$>1 \times 10^{3}$	$0.12 \ (\pm 0.02)$	0.15	>50
PNVT-10 ^a	$0.50 (\pm 0.02)$	0.55	>500	$0.10 \ (\pm 0.01)$	0.12	>50
$P(NDI2OD-T2)^b$	0.23 (±0.03)	0.27	$>1 \times 10^5$	NA	NA	NA
PNVT- 8^b	1.10 (±0.25)	1.4	>1500	$0.03 \ (\pm 5 \times 10^{-3})$	0.04	>550
PNVT- 10^b	0.95 (±0.15)	1.13	>400	$0.02 \ (\pm 4 \times 10^{-3})$	0.04	>55
$P(NDI2OD-T2)^c$	0.30 (±0.05)	0.40	$>1 \times 10^5$	NA	NA	NA
PNVT-8 ^d	1.05 (±0.05)	1.13	$>1 \times 10^4$	0.15 (±0.03)	0.23	$>1 \times 10^4$
$PNVT-10^d$	$1.10 (\pm 0.15)$	1.57	$>1 \times 10^4$	$0.18 (\pm 0.03)$	0.30	$>1 \times 10^4$

"BGBC FETs without PFBT modification, measured in glovebox. "BGBC FETs with PFBT modification, measured in glovebox. "TGBC FETs using the PMMA dielectric with a weight-average molecular weight of 120 kDa were measured in ambient. "TGBC FETs using the PMMA dielectric with a weight-average molecular weight of 996 kDa were measured in ambient."