P and N type copper phthalocyanines as effective semiconductors in organic thin-film transistor based DNA biosensors at elevated temperature

Nicholas T. Boileau, Owen A. Melville, Brendan Mirka, Rosemary Cranston, Benoit H. Lessard*

University of Ottawa, Department of Chemical and Biological Engineering
161 Louis Pasteur, Ottawa, Ontario, K1N 6N5
*Corresponding Author. E-mail: benoit.lessard@uottawa.ca

Supplementary Information
Figures S1 and S2 display the electronic data for CuPc and F16-CuPc devices deposited at $T = 25 \, ^\circ C$. These devices were tested identically to those deposited at $T = 140 \, ^\circ C$.

Figure S1. Field-effect mobility for (a,c) CuPc and (b,d) F16-CuPc devices deposited at $T = 25 \, ^\circ C$ with respect to applied gate-source voltage ($V_{GS}$) for characteristic devices at varied temperatures in air (a, b) and vacuum (c, d). This mobility was calculated between adjacent points in the transfer data using equation 2.
Figure S2. Performance of CuPc and F_{16}-CuPc devices (deposited at T = 140 °C) in air at various temperatures. (a) Field-effect mobility. (b) Threshold voltage ($V_T$). (c) on/off ratio. Presented are the averages for four devices with error bars representing the standard deviation. The legend in (a) is the same as in (b) and (c).