Electronic Supplementary Material (ESI) for RSC Applied Interfaces.

(F5PhO)2-F16-SiPc as an Air-Stable, High-Performance n-Type Semiconductor with Poor Cannabinoid Sensing Capabilities

Halynne R. Lamontagne[1,2], Mélanie Cyr[1,2], Mário C. Vebber[1], Sufal Swaraj[3], Cory S. Harris[4], Jaclyn L. Brusso[2], Adam J. Shuhendler[2,4,5*] and Benoît H. Lessard[1,6*]

[1]Department of Chemical and Biological Engineering, University of Ottawa, 161 Louis Pasteur, Ottawa, ON, Canada, K1N 6N5

[2]Department of Chemistry and Biomolecular Sciences, University of Ottawa, 150 Louis Pasteur, Ottawa, ON, Canada, K1N 6N5

[3]SOLEIL L'Orme des Merisiers, – Départementale 128, Saint-Aubin – 91190 France

[4]Department of Biology, University of Ottawa, 30 Marie Curie, Ottawa, ON, Canada, K1N 6N5

[5]University of Ottawa Heart Institute, 40 Ruskin St, Ottawa, ON, Canada, K1Y 4W7

[6]School of Electrical Engineering and Computer Science, University of Ottawa, 800 King Edward Ave, Ottawa, ON, Canada, K1N 6N5

*Corresponding Author: Benoit.Lessard@uottawa.ca (BHL)

Supporting Information (SI)

Table S1. Comparison of in-air performance of $(F_5PhO)_2$-F_{16}-SiPc detailed in this work (BGBC, Au electrodes) with previously reported performance (BGTC, Ag electrodes).

	This Work	Previous Work[13]
μ_e (cm^2/Vs)[a]	$(3.8 \pm 1.0) \times 10^{-2}$	$(8.1 \pm 0.3) \times 10^{-3}$
V_T (V)[a]	9.9 ± 1.9	10.1 ± 4.1
$I_{On/Off}$	10^4 - 10^5	10^3 - 10^4
I_{On} (A)[b]	3.16×10^{-4}	4.91×10^{-6}

[a] μ_e and V_T calculated from an average of a minimum of 20 devices; [b] I_{On} taken from the median.

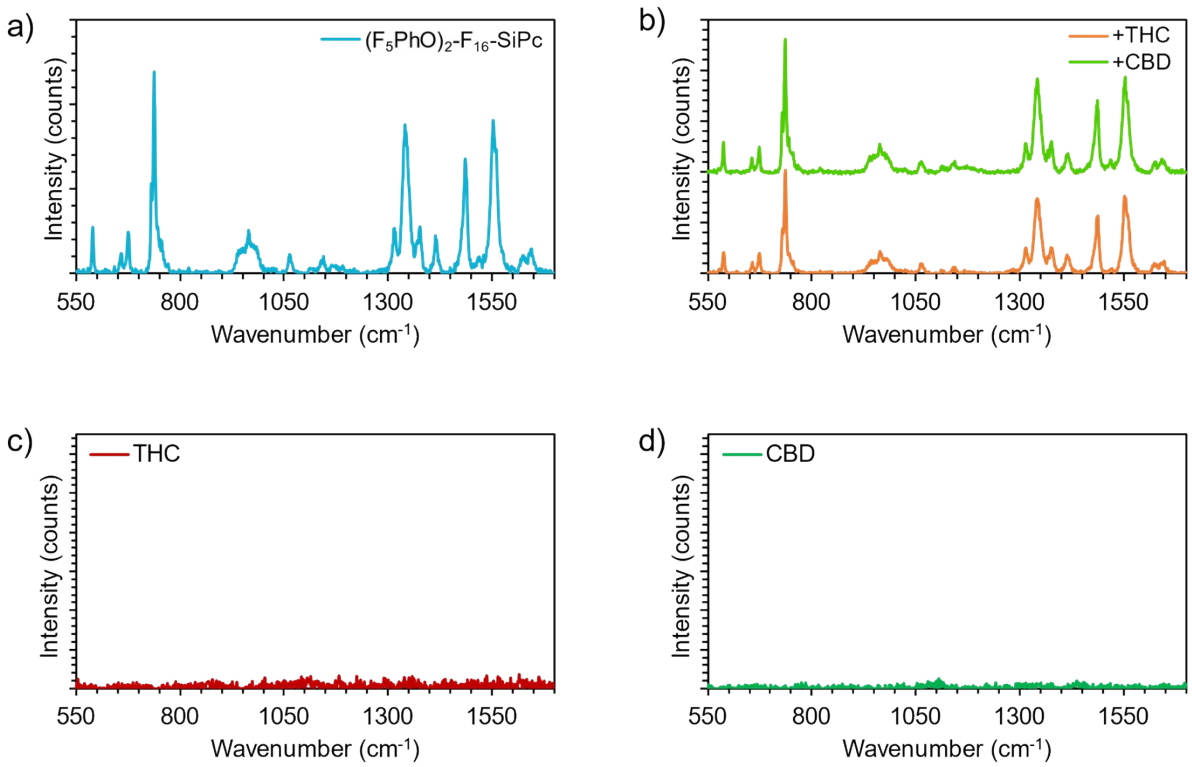

Figure S1. Raman spectra of (a) $(F_5PhO)_2$-F_{16}-SiPc and (b) $(F_5PhO)_2$-F_{16}-SiPc after exposure to THC and CBD. The baseline spectra of (c) THC and (d) CBD are included.