Supplementary materials: Photocontrolled organic field-effect transistors based on the fullerene C_{60} and spiropyran hybrid molecule.

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I. General remarks

Commercially available [60]fullerene (99.5% pure, Sigma-Aldrich) was used. Spiropyran **2** and fulleropyrrolidine **1** were prepared according to the method as described previously.[1] PANI was synthesized according to the method described in the literature.[2] Vacuum universal post VUP-5 (Russian) was used for reception films out of substances with high efficiency method of magnetron sputtering deposition. Knudsen cell parameters: the length of the cylindrical chamber is 25 mm, the inner diameter is 4 mm, the distance from the substrate to the cell was 3 cm, the operating temperature is about 300^{o} C. The thickness of films was controlled using a NanoScan 3D atomic force microscope. OFET's were irradiated with a L8253 xenon lamp included in an LC-4 radiation unit (Hamamatsu) at a medium radiation power through color glass filter UFS-1.

II. Experimental procedure

The photoswitchable OFET's were fabricated on glass substrates with a conductive ITO (indium tin oxide) layer, which act as a gate. The glass slides were cleaned by sonication (35 kHz) in a deionized water and dried in an oven at 80 ^{o}C for 15 min. PANI with a thickness of 500 nm was deposited by thermal evaporation in vacuum (2 x 10^{-5} mbar) through a shadow mask. Polyaniline was in a non-conducting state and acted as a subgate dielectric. [3] For the first type of transistor structures, a layer of pyrrolidinofullerene **1** with a thickness of 300 nm was deposited from the Knudsen cell. For the second type of structures, a photochromic organic compound and C60 as separated layers were deposited by this method (with a speed of 0.3–0.4 nm s^{-1}) with a thickness of 200 nm for each film. The mass of each organic substance used was 10 mg. Then, aluminum film (500 nm) was deposited under vacuum as the source and drain electrodes. The fabricated devices were characterized by a channel width of 10 mm, a channel length of 0.5 mm.

[1] A. R. Tuktarov, A. A. Khuzin, A. R. Tulyabaev, O. V. Venidictova, T. M. Valova, V. A. Barachevsky, L. M. Khalilov, and U. M. Dzhemilev, RSC Advances **6**, 71151 (2016)

[2] Y. N. Biglova, R. B. Salikhov, et al. Physics of the Solid State 2017. **59**, 1253 (2017)

[3] V. F. Ivanov, A. A. Nekrasov, O. L. Gribkova, and A. A. Vannikov. Elecrrochimica Acta **41**, 1811 (1996).