Electronic Supplementary Information†

5-aminoisophthalic acid low molecular weight gelator based novel Semiconducting Supramolecular Zn(II)-Metallogel: Unlocking Efficient Schottky Barrier Diode for Microelectronics

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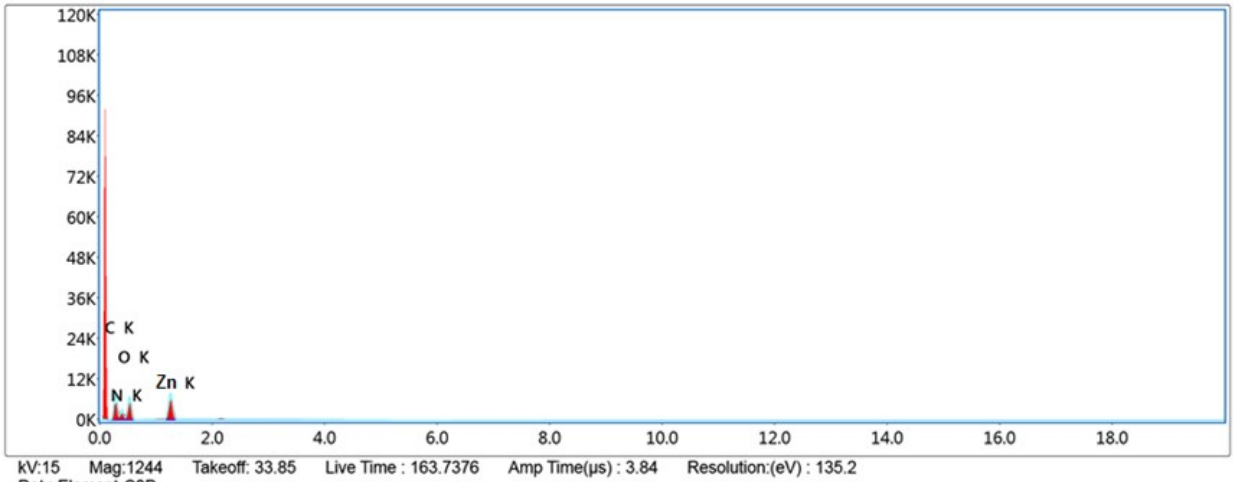
EDX Spectrum Analysis



Element	Weight %	Atomic %	Error %	Net Int.	K Ratio	Z	A	F
C K	28.95	35.88	7.80	323.58	0.1235	1.0427	0.4090	1.0000
N K	21.46	22.81	10.14	131.23	0.0456	1.0153	0.2094	1.0000
O K	34.44	32.04	9.57	309.87	0.0768	0.9916	0.2249	1.0000
Zn K	15.14	9.27	4.83	413.58	0.0954	0.9080	0.6933	1.0009

Fig. S1. EDX spectrum analysis of ZnA-5AIA metallogel.

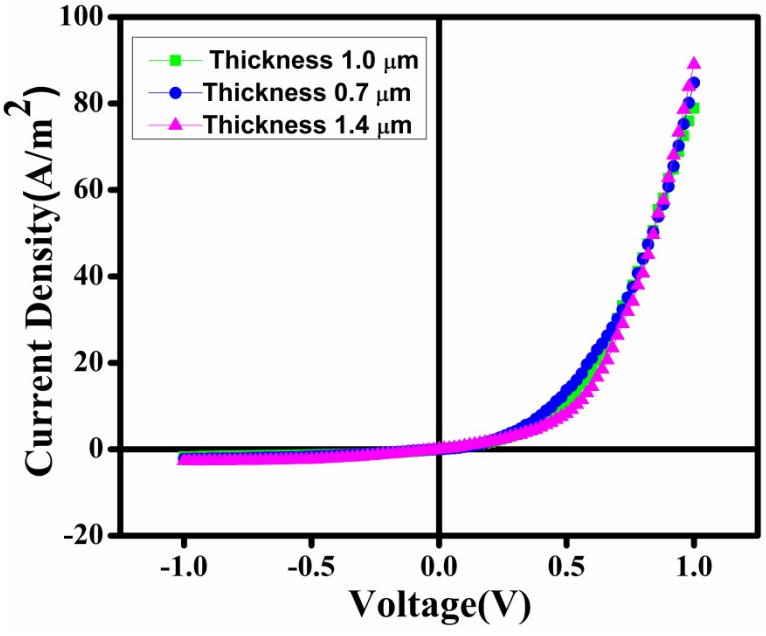


Fig S2. J−V characteristics curve of the fabricated devices varying the thickness of thin film of metallogel (Zn(II)).

Table S1. Comparison table of Electrical parameters of metallogel (Zn(II)) based thin film devices.

Thickness of Metallogel	**Rectification Ratio**	**Conductivity (S.m-1)**
0.7 μm	38.57	1.33 × 10-5
1.0 μm	45.11	1.34 × 10-5
1.4 μm	33.41	1.19 × 10-5

From Table S1, it can be clearly shown that the thin film devices with thickness of ZnA-5AIA metallogel are about 1.0 μm has the better rectification ratio than the two counter parts. In addition one of the vital electrical parameter of the devices i.e. conductivity of the devices with thickness of metallogel are about 1.0 μm shows better score than the devices with thickness 1.4 μm, while the conductivity is almost same with the devices with thickness 0.7 μm. That's why we have decided for further analyses of the electrical properties of the devices with thickness of ZnA-5AIA metallogel are about 1.0 μm.