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## **Supporting Information**

Graphene oxide based planar heterojunction perovskite solar cell under ambient condition

Khursheed Ahmad<sup>a</sup> and Shaikh M. Mobin<sup>\*a,b,c</sup>

<sup>a</sup>Discipline of Chemistry, <sup>b</sup>Centre for Biosciences and Bio-Medical Engineering and <sup>c</sup>Discipline of Metallurgy Engineering and Material Science, Indian Institute of Technology Indore, Simrol,

Khandwa Road, Indore 453552, India

\*Corresponding author: email: <u>xray@iiti.ac.in</u>

Tel: +91 731 2438 76 2

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Fig. S4 Current density-voltage (J-V) characteristics of the planar heterojunction PSSCs with

GO/PEDOT:PSS as hole transport layer deposited at 2000 rpm (a) and 3000 rpm (b) for 30 sec.

Fig. S5 Current density-voltage (J-V) characteristics of the planar heterojunction PSSCs with

PEDOT:PSS as hole transport layer after exposure to ambient conditions for 96 h.



Fig. S1 XRD pattern of GO.



**Fig. S2** Cross-sectional FE-SEM images (A-B), TEM images (C-E) and SAED pattern (F) of MAPbI<sub>3</sub> film.



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**Fig. S5** Current density-voltage (*J-V*) characteristics of the planar heterojunction PSSCs with PEDOT:PSS as hole transport layer after exposure to ambient conditions for 96 h.