

## Hybrid Zinc Oxide:Cu-Phthalocyanine Bulk-Heterojunction Photovoltaic Device

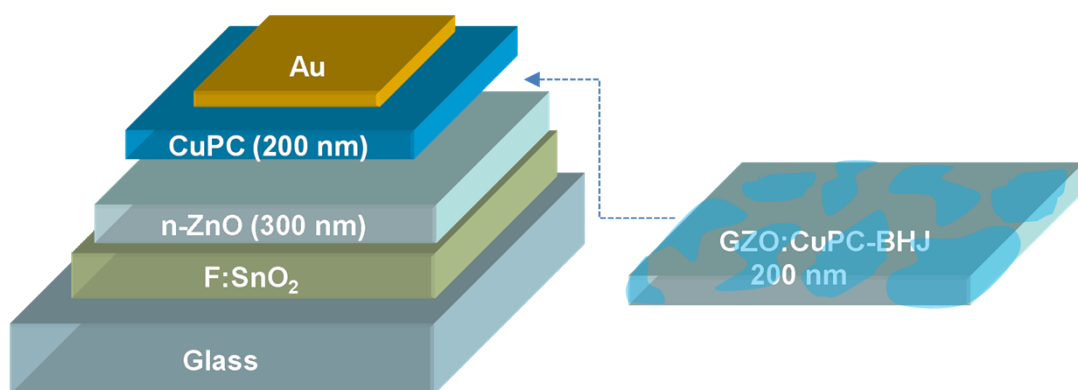
Masanobu Izaki,<sup>\*,a,b</sup> Ryo Hisamatsu,<sup>a</sup> Takamasa Saito,<sup>a</sup> Kazufumi Murata,<sup>a</sup> Junji Sasano,<sup>a</sup> Tsutomu Shinagawa<sup>c</sup>

<sup>a</sup>Graduate School of Engineering, Toyohashi University of Technology, Toyohashi, Aichi 441-8580, Japan, E-mail:

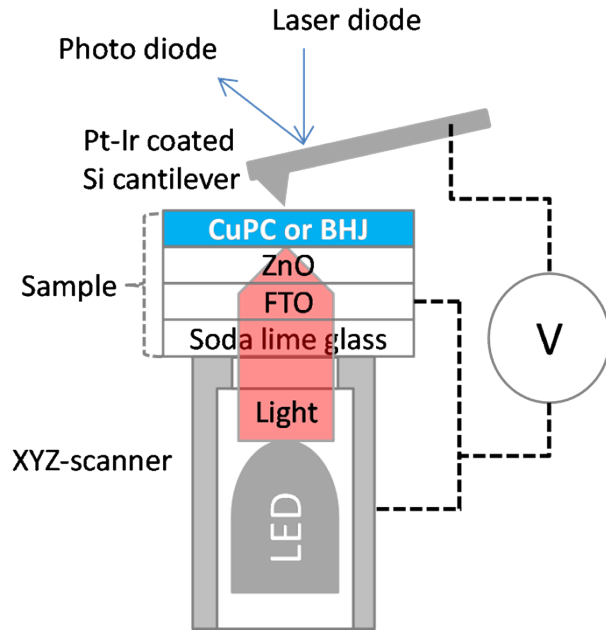
<sup>b</sup>JST, CREST, 5, Sanban-cho, Chiyoda-ku, Tokyo 102-0075, Japan

<sup>c</sup>Osaka Municipal Technical Research Institute, Osaka 536-8553, Japan

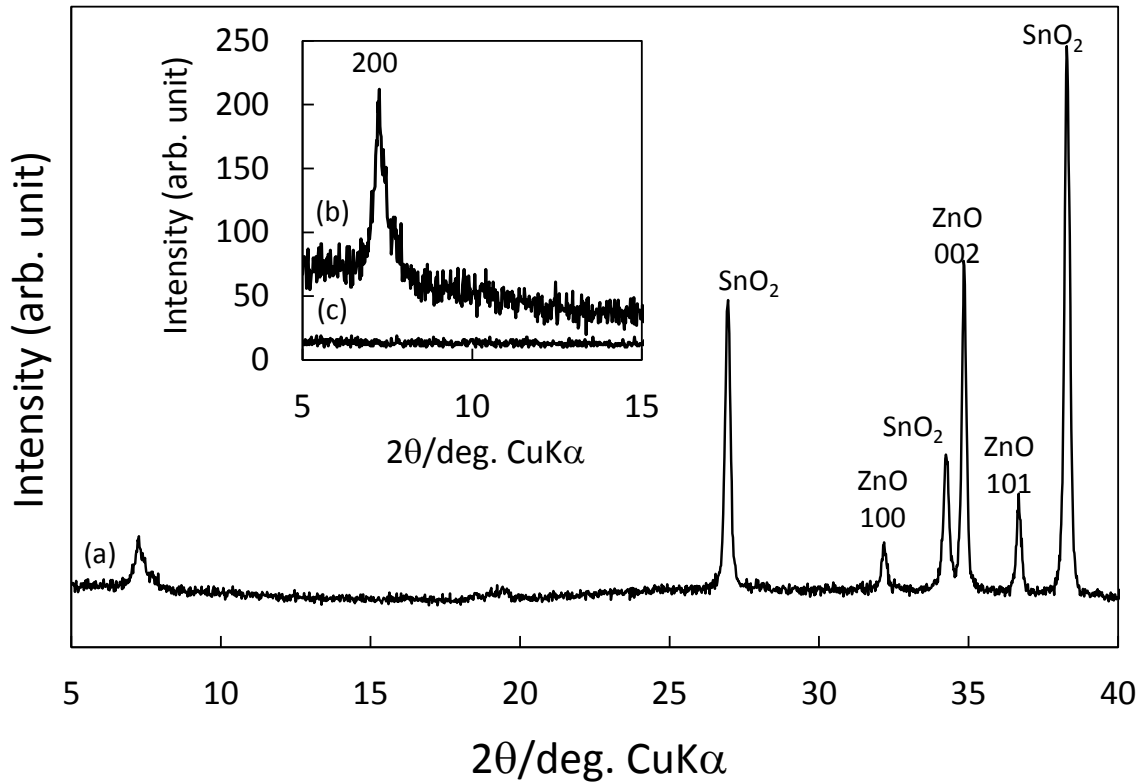
\*E-mail: [m-izaki@me.tut.ac.jp](mailto:m-izaki@me.tut.ac.jp)



**Figure S1.** Schematic diagram of the hybrid photovoltaic devices with and without GZO:CuPC-bulk-heterojunction (BHJ) layer.



**Figure S2.** Schematic illustration of photo-assisted Kelvin Force Probe Microscopy (KFM).



**Figure S3.** X-ray diffraction patterns for layered CuPC/n-ZnO(a,b) and CuPC/CuPC:GZO/n-ZnO hybrid photovoltaic devices (c) prepared on FTO substrate.