

# Effect of anchoring groups in zinc phthalocyanine on the dye-sensitized solar cell performance and stability

## Supporting Information

**Miguel García-Iglesias,<sup>a§</sup> Jun-Ho Yum,<sup>b§</sup> Robin Humphry-Baker,<sup>b</sup> Shaik M. Zakeeruddin,<sup>b</sup> Peter Péchy,<sup>b</sup> Purificación Vázquez,<sup>a</sup> Emilio Palomares,<sup>c</sup> Michael Grätzel,<sup>b</sup> Mohammad K. Nazeeruddin<sup>b\*</sup> and Tomás Torres<sup>ad\*</sup>**

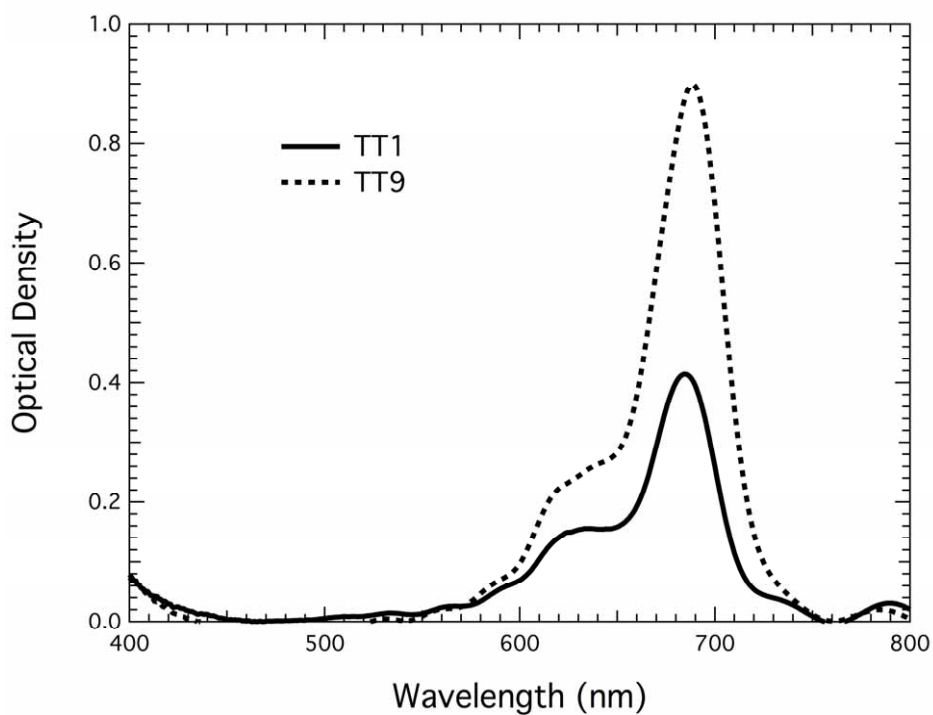
<sup>a</sup> *Universidad Autónoma de Madrid, Departamento de Química Orgánica, Cantoblanco, 28049-Madrid, Spain. Fax: + 34 9 1497 3966; Tel: + 34 9 1497 4151; E-mail: [tomas.torres@uam.es](mailto:tomas.torres@uam.es)*

<sup>b</sup> *Laboratory for Photonics and Interfaces, Institute of Chemical Sciences and Engineering, School of Basic Sciences, Swiss Federal Institute of Technology, CH-1015 Lausanne (Switzerland). Fax: +41 21 693 4111. Tel: 41 21 693 61 24; E-mail: [mdkhaja.nazeeruddin@epfl.ch](mailto:mdkhaja.nazeeruddin@epfl.ch)*

<sup>c</sup> *Institute of Chemical Research of Catalonia (ICIQ), Lab 1. Avda. Països Catalans, 16. 43007. Tarragona. Spain. Fax: +34 977 920 223; Tel: +34 977 920 241; E-mail: [epalomares@iciq.es](mailto:epalomares@iciq.es)*

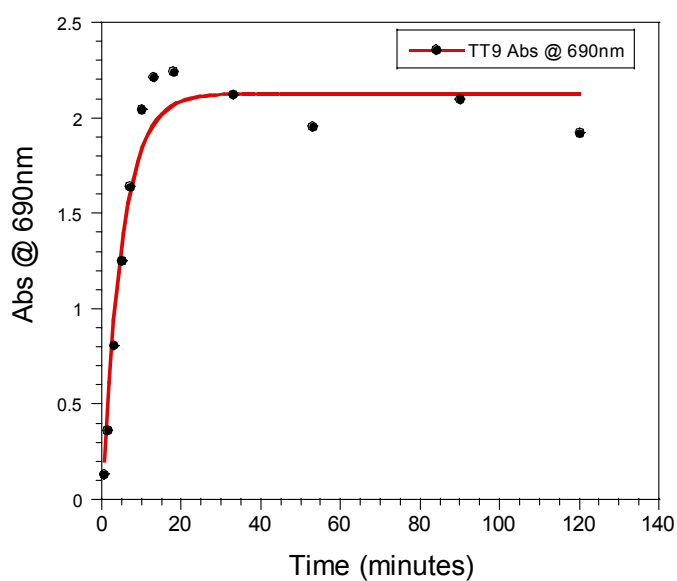
<sup>d</sup> *ICREA. Passeig Lluís Companys, 23. 08010. Barcelona. Spain.*

<sup>e</sup> *IMDEA-Nanociencia. Facultad de Ciencias, Cantoblanco, 28049- Madrid, Spain*



**Figure S1.** Absorption spectra of **TT-1** (solid line) and **TT-9** (dashed line) on 2.8 μm thick transparent nanocrystalline TiO<sub>2</sub> film.

Figure S2 shows a fast adsorption profile for **TT-9** with kinetics of 0.2 min<sup>-1</sup>. This value is faster than usual organic dyes which have adsorption kinetics between 0.7-0.9 min<sup>-1</sup>.



**Figure S2.** Adsorption kinetics profile of **TT-9** on nanocrystalline TiO<sub>2</sub> film: The absorption change was detected at 690 nm.