## **SUPPORTING INFORMATION FOR:**

## Two-Photon Absorption in a Conformationally Twisted D-π-A Oligomer : A Synergic Photosensitizing Approach for Multiphoton Lithography

Jean-Pierre Malval,\*<sup>*a*</sup> Sylvain Achelle,\*<sup>*b*</sup> Loic Bodiou,<sup>*c*</sup> Arnaud Spangenberg,<sup>*a*</sup> Laura Chia Gomez, <sup>*a*</sup> Olivier Soppera <sup>*a*</sup> and Françoise Robin-le Guen. <sup>*b*</sup>

<sup>a</sup> Institut de Science des Matériaux de Mulhouse, UMR CNRS 7361, Université de Haute-Alsace, 15 rue Jean Starcky, 68057 Mulhouse, France E-Mail : jean-pierre.malval@uha.fr; Tel : +33 (0)389 608 769
<sup>b</sup> Institut des Sciences Chimiques de Rennes UMR CNRS 6226, IUT de Lannion, rue Edouard Branly, BP 30219, F22302 Lannion Cedex, France E-Mail : sylvain.achelle@univ-rennes1.fr; Tel : +33 (0)296 469 448

<sup>c</sup> Úniversité Européenne de Bretagne (UEB) CNRS, FOTON, UMR 6082, CCLO, ENSSAT BP80518, 22305 Lannion cedex, France

## CONTENTS

- Figure S1. <sup>1</sup>H 500MHz NMR and <sup>13</sup>C 100MHz NMR spectra of **Og** in CDCl<sub>3</sub>
- Figure S2. Powder XRD spectrum of oligomer Og
- Figure S3. Normalized absorption and fluorescence spectra of M and Og in apolar medium (solvent : hexane).
- **Figure S4.** Time fluorescence decays of the chromophores recorded at their respective  $\lambda_{fluo}^{MAX}$ ; instrumental response function (IRF). Residual graphs relative to single- or bi-exponential fits. (solvent : dichloromethane)
- Figure S5. Stern-Volmer plots as observed by emission lifetimes in dichloromethane



Figure S1.



Figure S2.



Figure S3.



Figure S4.



Figure S5.