## Multicolor Fluorescent Polymers Inspired from Green Fluorescent Protein

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## **Table of Contents**

1. Analytical and Spectral Characterizations	
Scheme S1, Figure S1	S2
2. Analytical and Spectral Characterizations of Chromophores	
2.1 <sup>1</sup> H NMR Spectra of Chromophores	S3-5
2.2 <sup>13</sup> C NMR Spectra of Chromophores	S5-7
2.3 IR Spectra of Chromophores	S8-9

## 1. Analytical and Spectral Characterizations

(A) preparation of 2-(hexyloxy)benzaldehyde



(B) deprotection of methoxy group



Scheme S1. Synthetic route of 2-(hexyloxy)benzaldehyde (A) and the deprotection of methoxy groups (B).



**Figure S1.** IR spectra of multicolor fluorescent polymers: PEG-c<sub>1</sub>-PMMA (a), PEG-c<sub>2</sub>-PMMA (b), PEG-c<sub>3</sub>-PMMA (c), PEG-c<sub>4</sub>-PMMA (d), PEG-c<sub>5</sub>-PMMA (e) and PEG-c<sub>6</sub>-PMMA (f).

## 2. Analytical and Spectral Characterizations of Chromophores



2.1 <sup>1</sup>H NMR Spectra of Chromophores (c and c<sub>1</sub>-c<sub>6</sub>)





2.2 <sup>13</sup>C NMR Spectra of Chromophores (c and c<sub>1</sub>-c<sub>6</sub>)











