Supporting Information

Irgacure 2959-functionalized poly(ethyleneimine)s as improved photoinitiators: Enhanced water solubility, migration stability and visible-light operation

Tugce Nur Eren, ^a Neslihan Kariksiz, ^a Gozde Demirci, ^b Duygu Tuncel, ^a

Neren Okte, ^a Havva Yagci Acar, ^{c, d} Duygu Avci^{* a}

^a Department of Chemistry, Bogazici University, 34342 Bebek, Istanbul, Turkey

^b Graduate School of Materials Science & Engineering, Koc University, Rumelifeneri Yolu, 34450 Sariyer, Istanbul, Turkey

^c Department of Chemistry, Koc University, 34450 Sariyer, Istanbul, Turkey

^d Surface Science & Technology Center (KUYTAM), Koc University, 34450 Sariyer, Istanbul, Turkey

*Author for correspondence: Department of Chemistry, Bogazici University, 34342 Bebek, Istanbul, Turkey. Email: <u>avcid@boun.edu.tr</u> **Measurements and Characterizations.** ¹³C- NMR spectrum was recorded in deuterated water (D_2O) at ambient temperature on a Varian Gemini (400 MHz) spectrometer. Differential scanning calorimetric (DSC) measurements were performed on a TA Instruments Q250 with a heating rate of 10 °C/min.

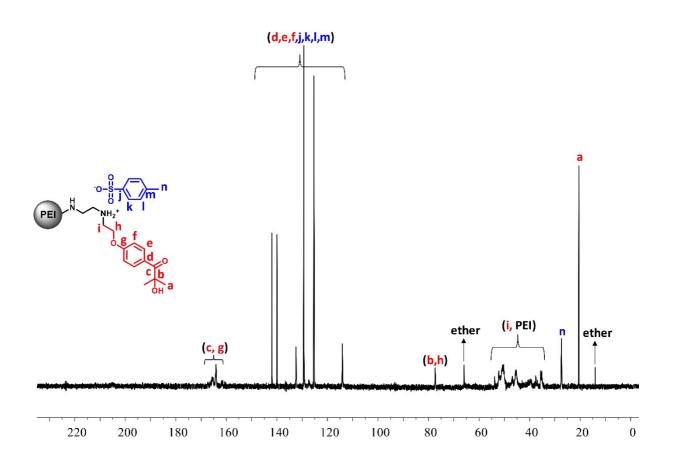


Figure S1. ¹³C-NMR spectrum of PEI-I2959-Ts.

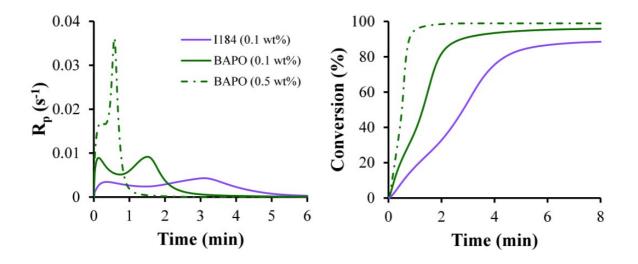


Figure S2. R_p vs time and Conversion (%) vs time plots of BAPO (0.1 wt%) and BAPO (0.5 wt%) under visible light irradiation, I184 (0.1 wt%) under UV light irradiation.