Supporting Information

Biological properties of heparins modified with an arylazopyrazole-based photoswitch

Marta Stolarek[1], Aleksandra Pycior[1], Piotr Bonarek[2], Małgorzata Opydo[3], Elzbieta Kolaczkowska[3], Kamil Kamiński[1], Andrzej Mogielnicki[4], Krzysztof Szczubiałka[1],*

[1] Faculty of Chemistry, Jagiellonian University, Gronostajowa 2, 30-387 Krakow, Poland

[2] Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Gronostajowa 7, 30-387 Krakow, Poland

[3] Laboratory of Experimental Hematology, Institute of Zoology and Biomedical Research, Faculty of Biology, Jagiellonian University, Gronostajowa 9, 30-387 Krakow, Poland

[4] Department of Pharmacodynamics, Medical University of Bialystok, Mickiewicza 2c, 15-089 Bialystok, Poland

Corresponding author email: szczubia@chemia.uj.edu.pl

Contents

Figure S1. LC-MS data of PS (PDA detector)
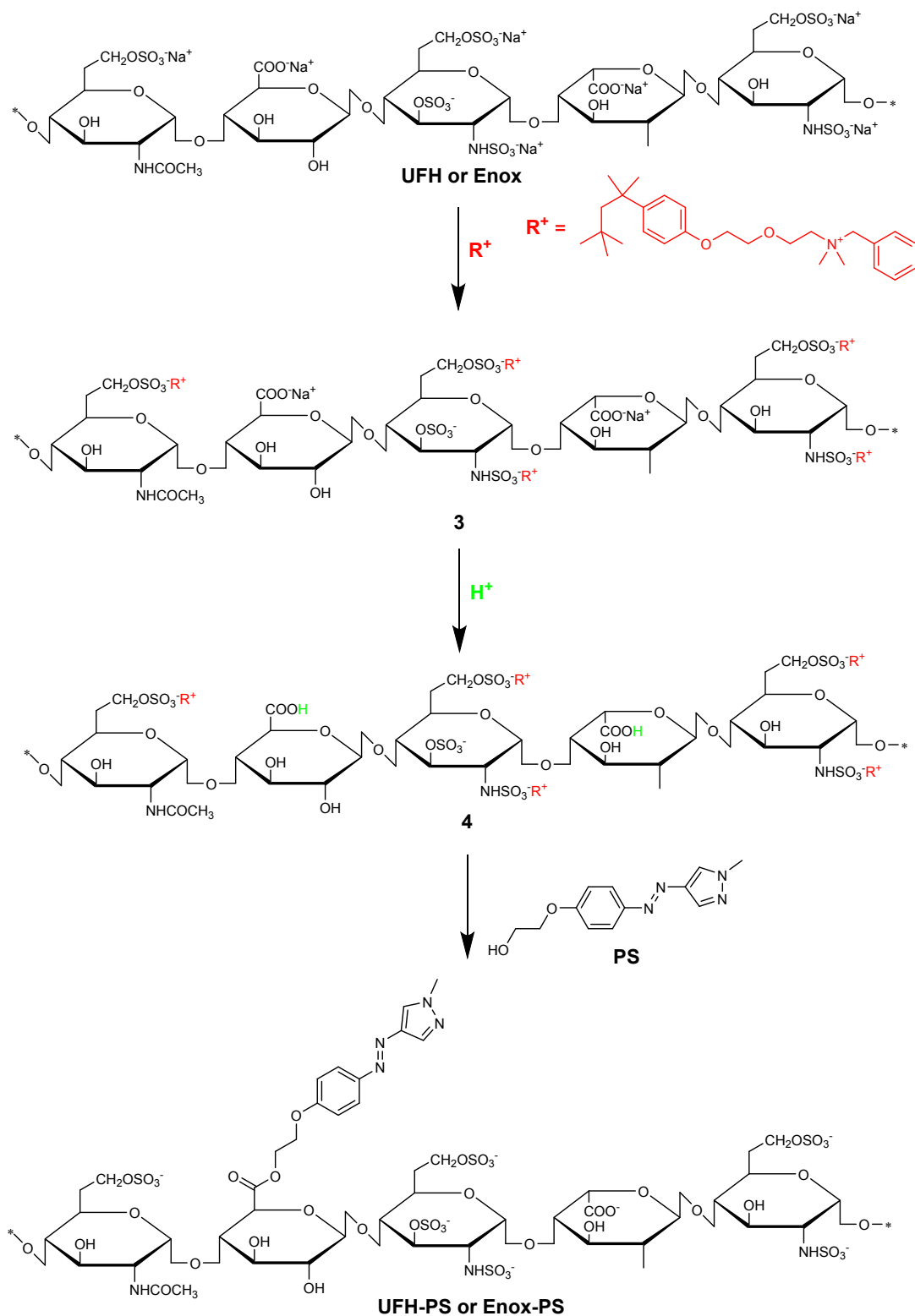
Figure S2. Scheme of UFH-PS and Enox-PS synthesis

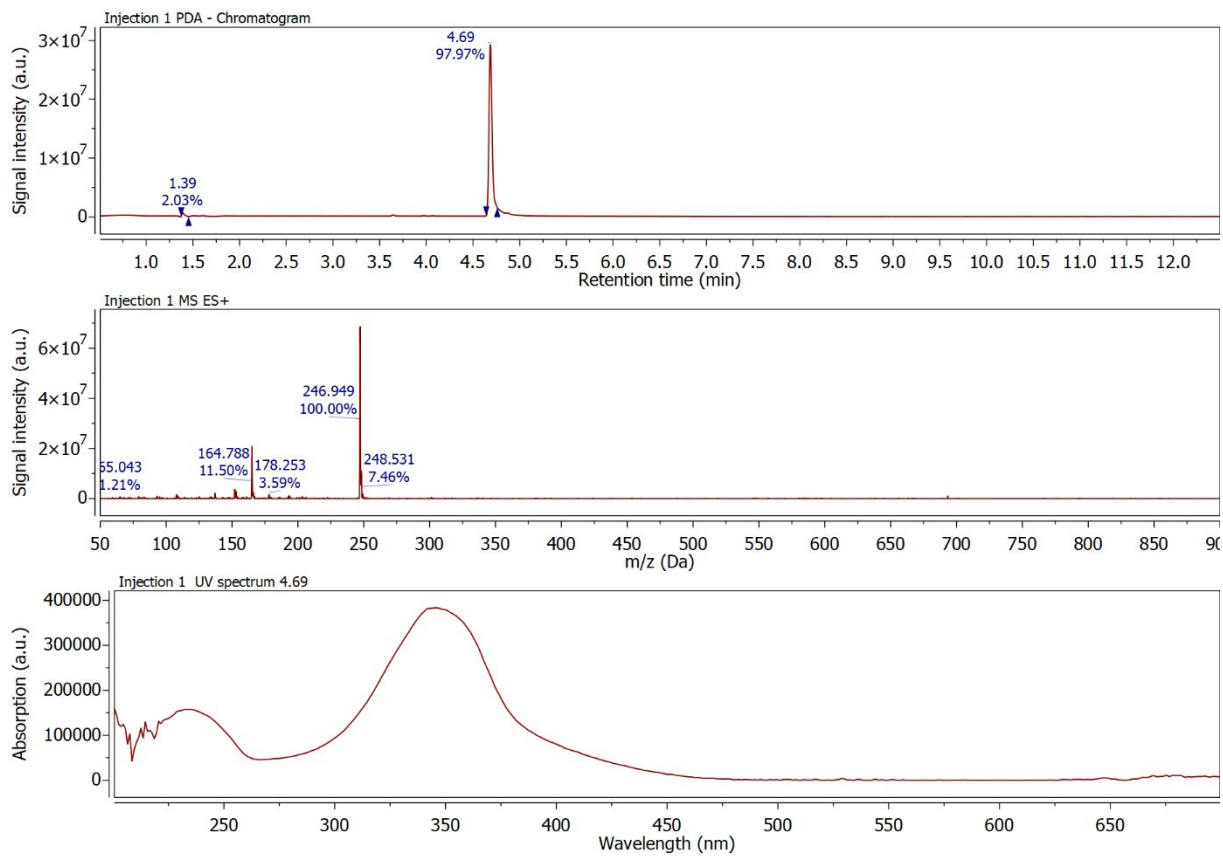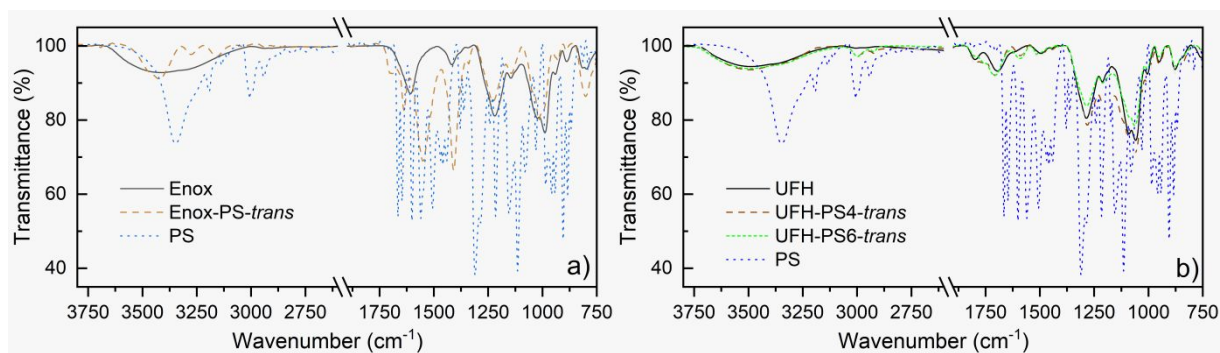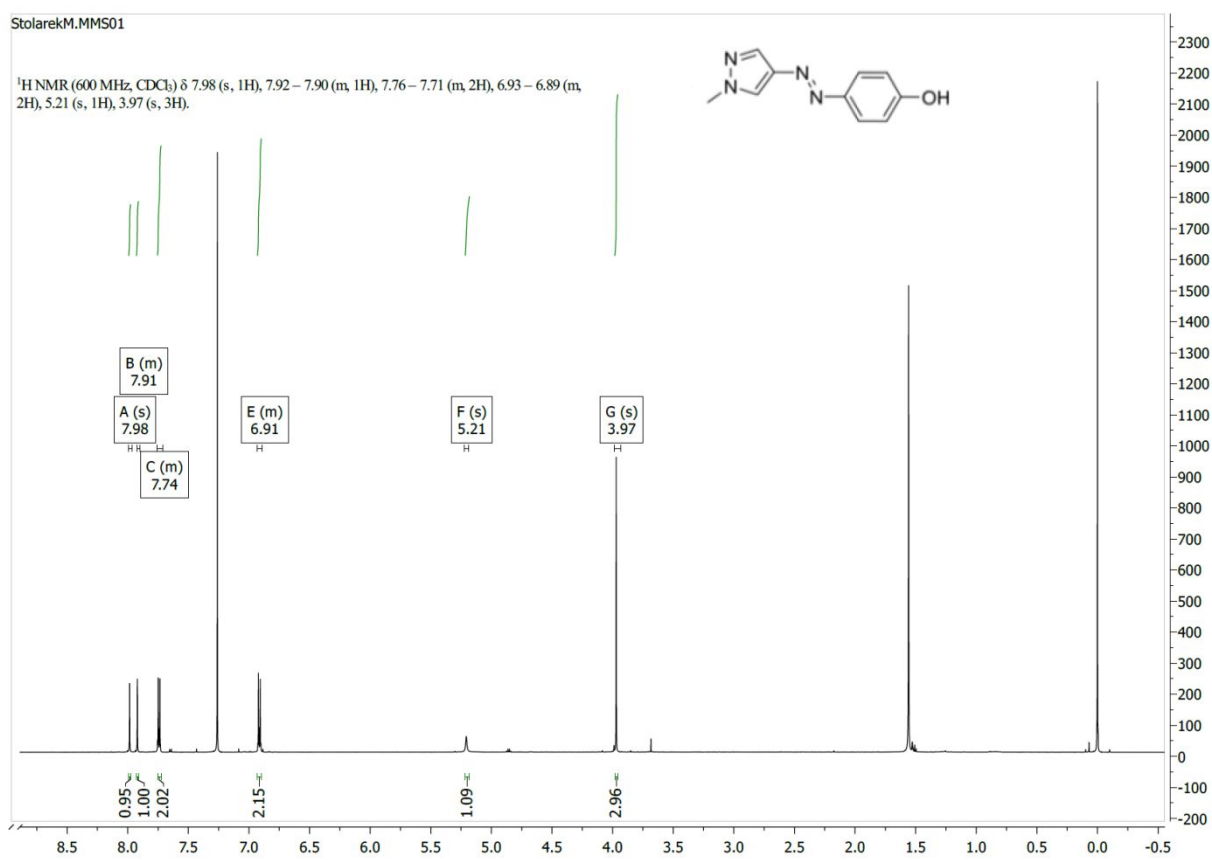**Figure S3.** FT-IR absorption spectra of (a) Enox, Enox-PS-*trans* and PS; and (b) UFH, UFH-PS4-*trans*, UFH-PS6-*trans*, and PS

StolarekM.MMS01

^{1}H NMR (600 MHz, CDCl$_3$) δ 7.98 (s, 1H), 7.92 – 7.90 (m, 1H), 7.76 – 7.71 (m, 2H), 6.93 – 6.89 (m, 2H), 5.21 (s, 1H), 3.97 (s, 3H).

Figure S4. ^{1}H NMR spectrum of 2.
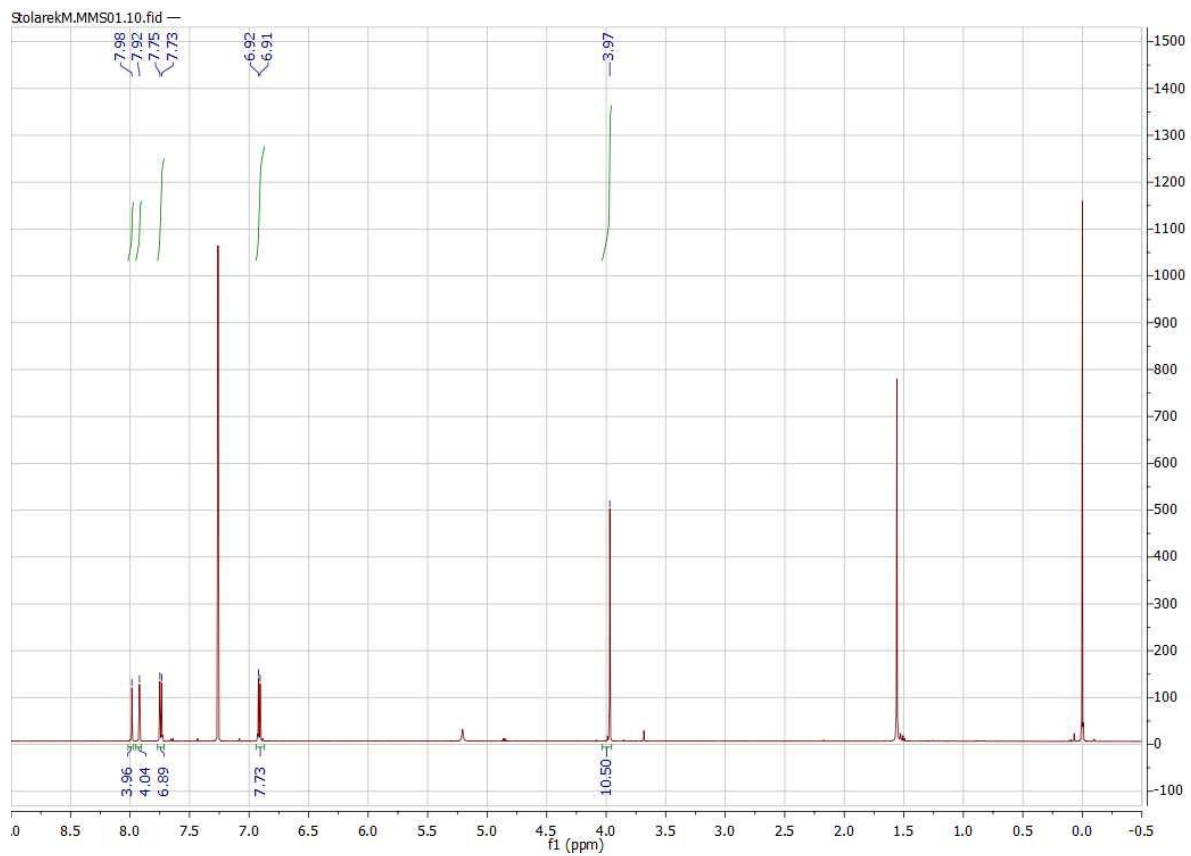
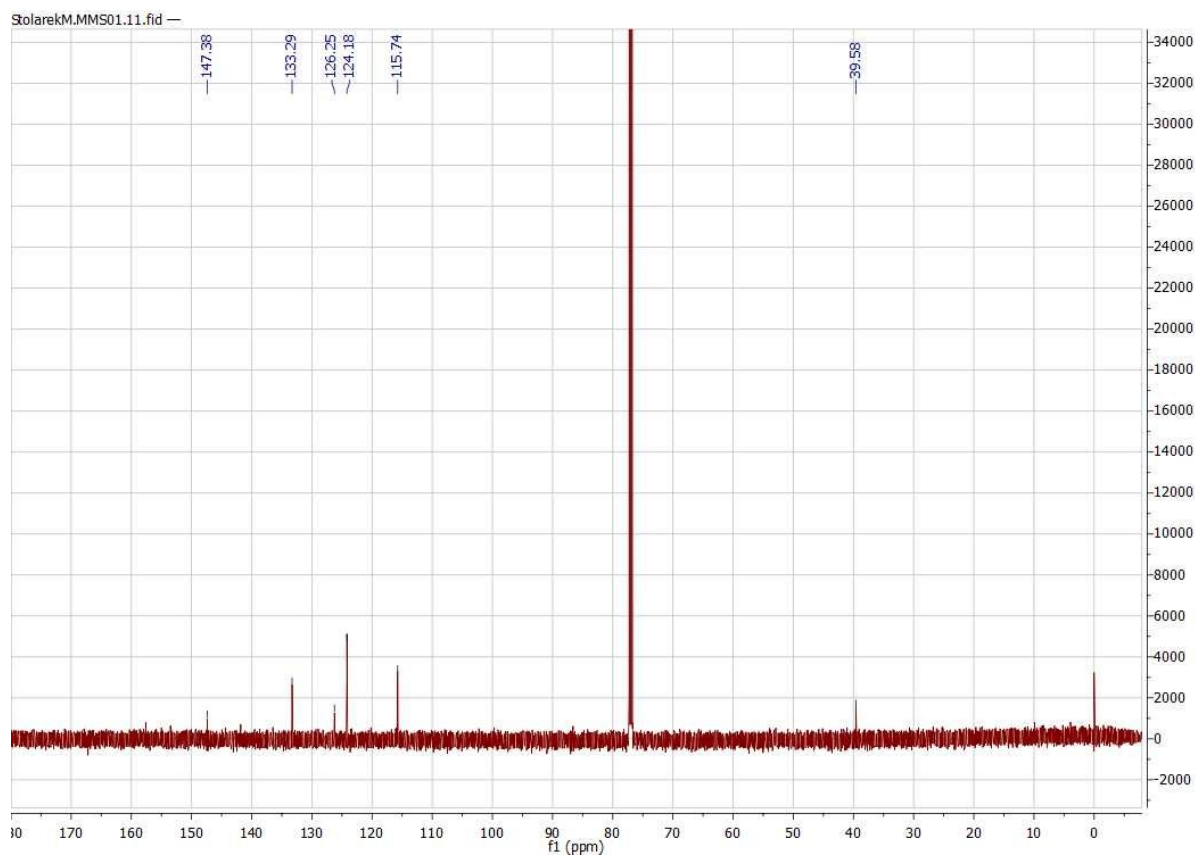StolarekM.MMS01.10.fid —

Figure S5. ^{1}H NMR spectrum of PS
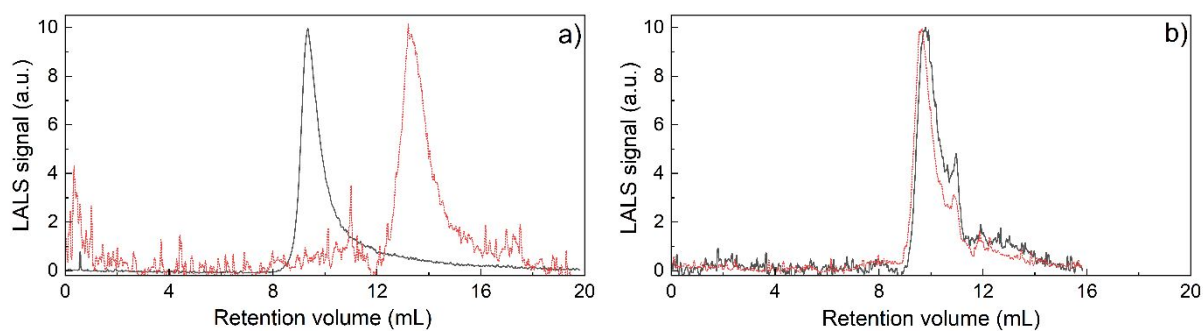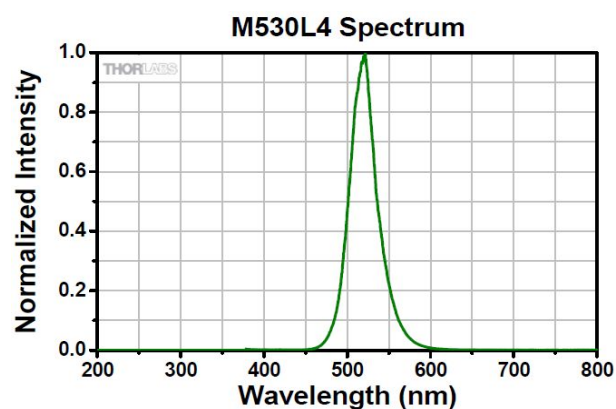
Figure S6. ^{13}C NMR spectrum of PS

Figure S7. GPC traces of a) UFH-PS6 and b) Enox-PS. Traces for *trans* and *cis* PS configuration are shown a solid and dotted lines, respectively.
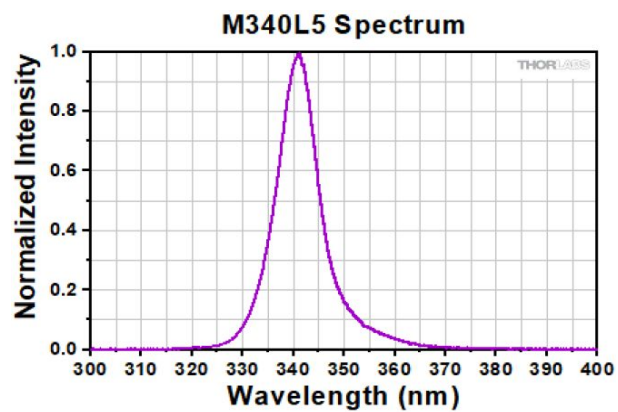
Figure S8. Spectral distributions of the LED lamps used for the irradiations. Data taken from the lamp specifications given by the maufacturer (Thorlabs, www.thorlabs.com).