

Synthesis of nitric oxide probes with fluorescence lifetime sensitivity

Natalia G. Zhegalova, Garrett Gonzales, Mikhail Y. Berezin*

Department of Radiology, Washington University in St. Louis School of Medicine
berezinm@mir.wustl.edu

Contents

Figure S1 Absorption and emission spectra of DAP-LT2 before and after treatment with DEA NONOate	2
Figure S2 Binding constant of DAP-LT1 to albumin.....	2
Figure S3 Fluorescence lifetime decays of DAP-LT1 before and after treatment with DEA NONOate.....	3
Figure S4 Fluorescence lifetime decays of DAP-LT1 before and 5 min after treatment with DEA NONOate and the decays of entry 11. All at 37 °C.....	3
Figure S5 Fluorescence decays of DAP-LT2 before and after reaction with NO	4
¹ H NMR DAP-LT1, CD ₃ OD	5
¹³ C NMR DAP-LT1, CD ₃ OD	5
¹ H NMR DAP-LT2, CD ₃ OD.....	6
¹³ C NMR DAP-LT2, CD ₃ OD	6
¹ H NMR Benzotriazole dye 11, CD ₃ OD.....	7
¹³ C NMR Benzotriazole dye 11, CD ₃ OD	7

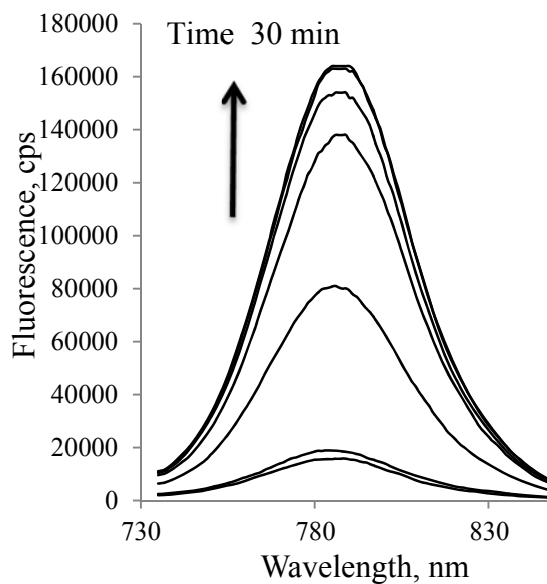
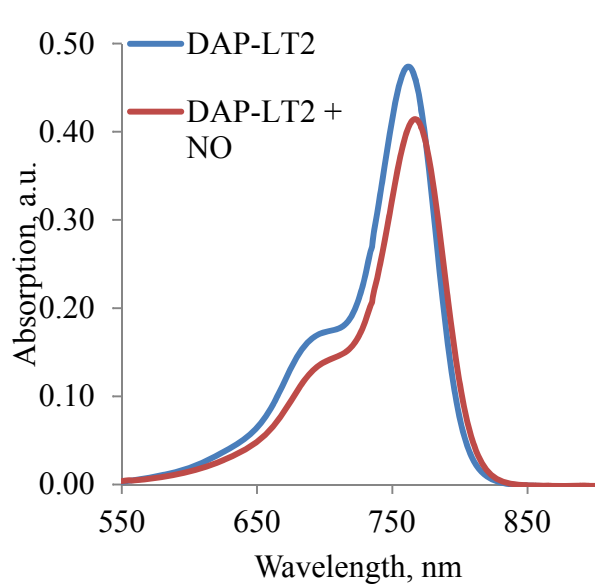


Figure S1 Absorption and emission spectra of DAP-LT2 before and after treatment with DEA
NONOate

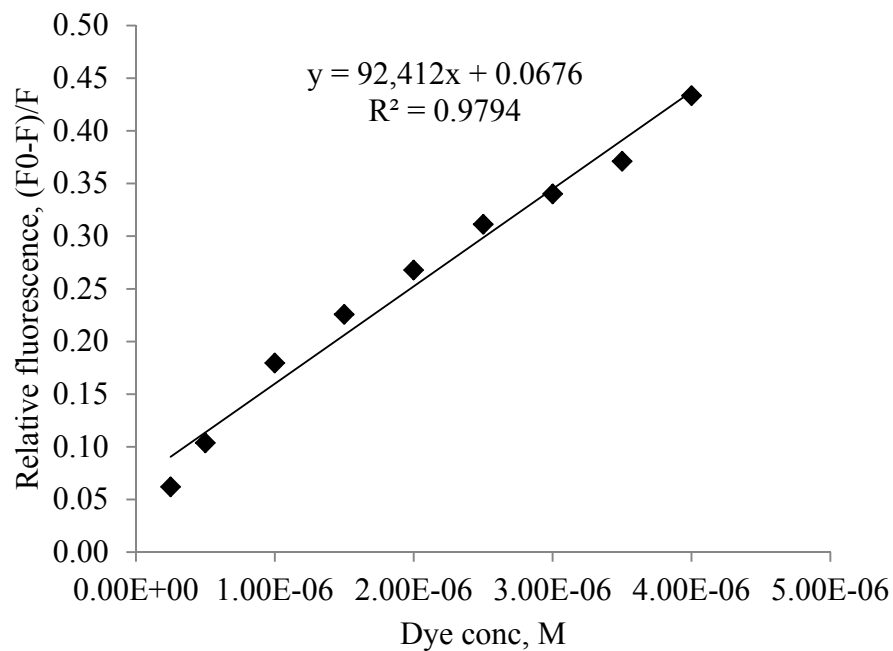


Figure S2 Binding constant of DAP-LT1 to albumin

Ex/em: 279/345 nm, BSA concentration 1.4×10^{-6} M in PBS. The slope of the trend lines corresponds to the binding constants for DAP-LT1 $\sim 92,400 \text{ M}^{-1}$.

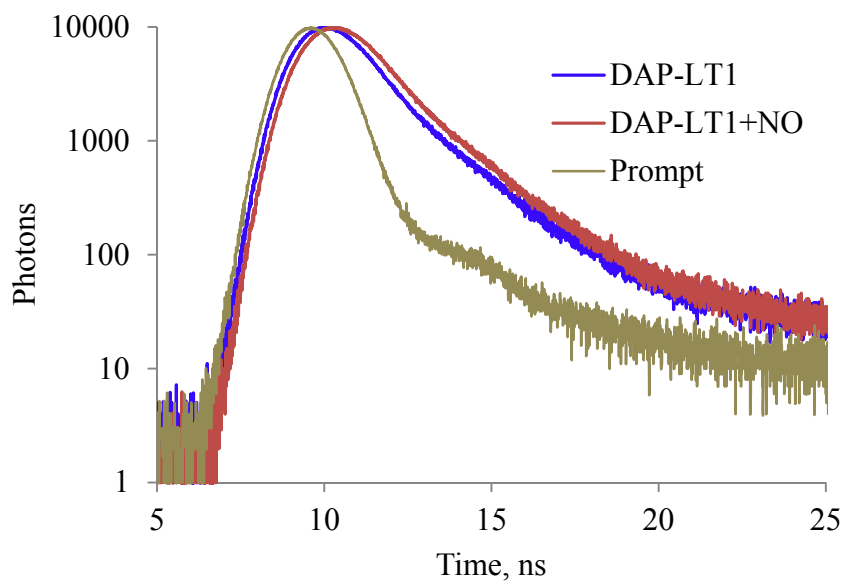


Figure S3 Fluorescence lifetime decays of DAP-LT1 before and after treatment with DEA NONOate

Ex/em 740/790 nm. 10% serum/PBS buffer

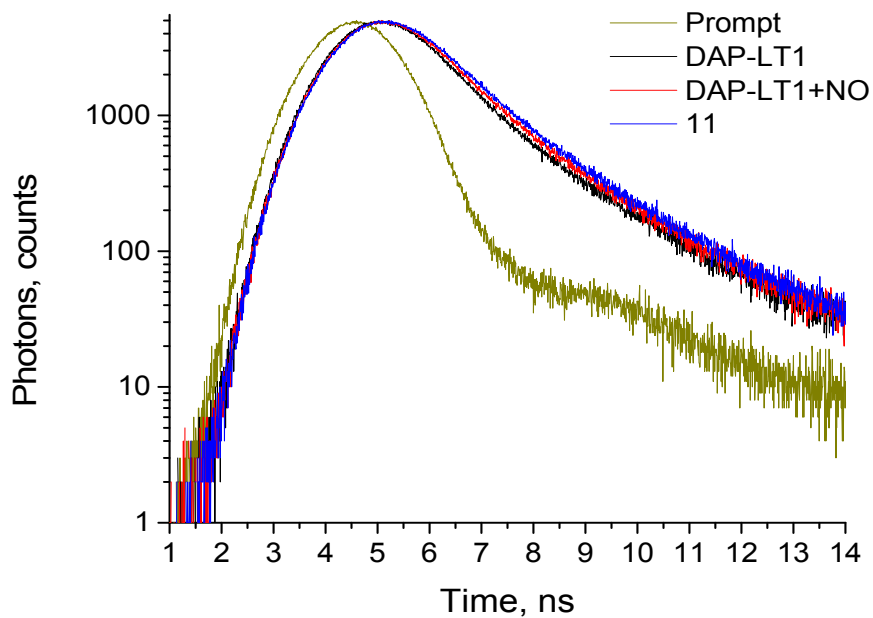


Figure S4 Fluorescence lifetime decays of DAP-LT1 before and 5 min after treatment with DEA NONOate and the decays of entry 11. All at 37 °C

Ex/em 740/790 nm. 10% serum/PBS buffer. Mean lifetime: DAP-LT1 ~ 0.94 ns, DAP-LT1+NO donor (5 min) ~ 1.02 ns and entry 11 ~ 1.09 ns.

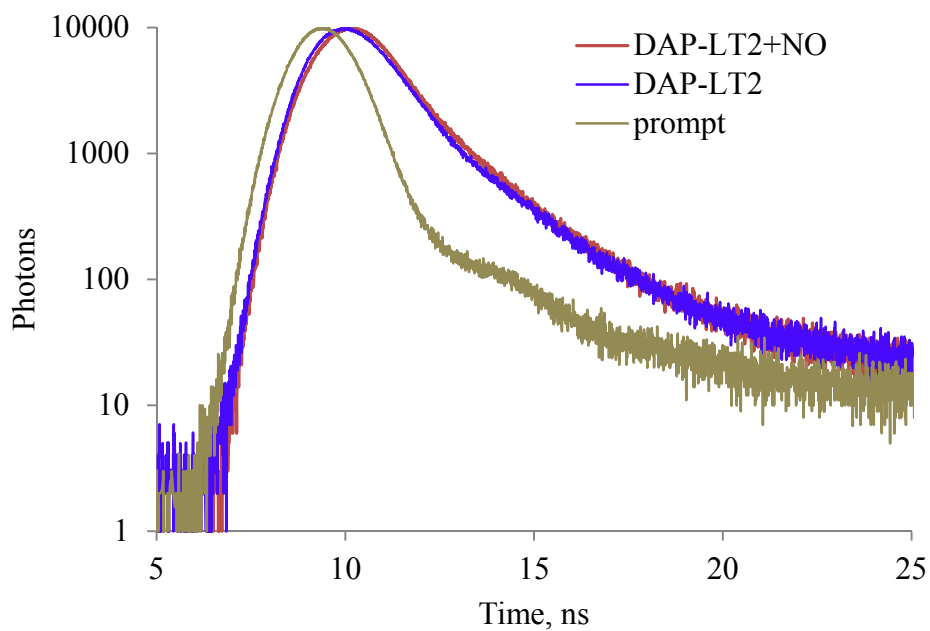
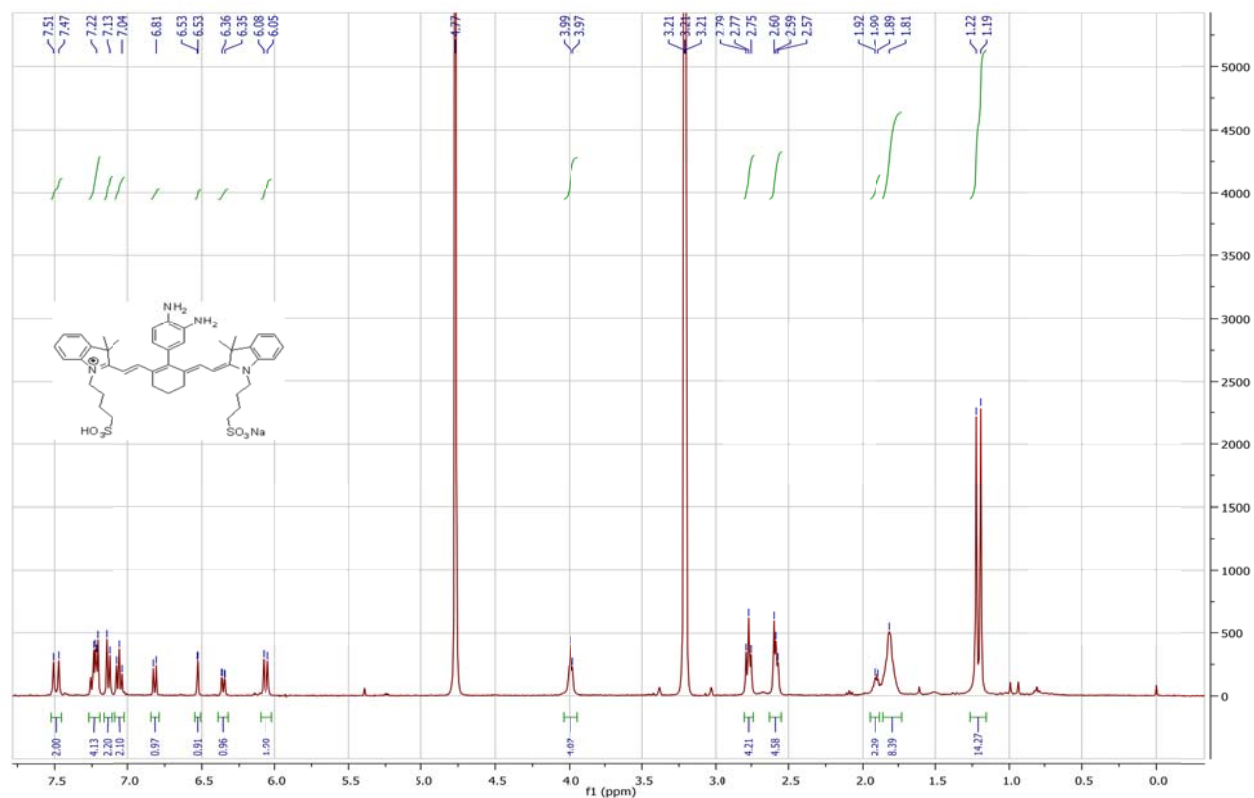


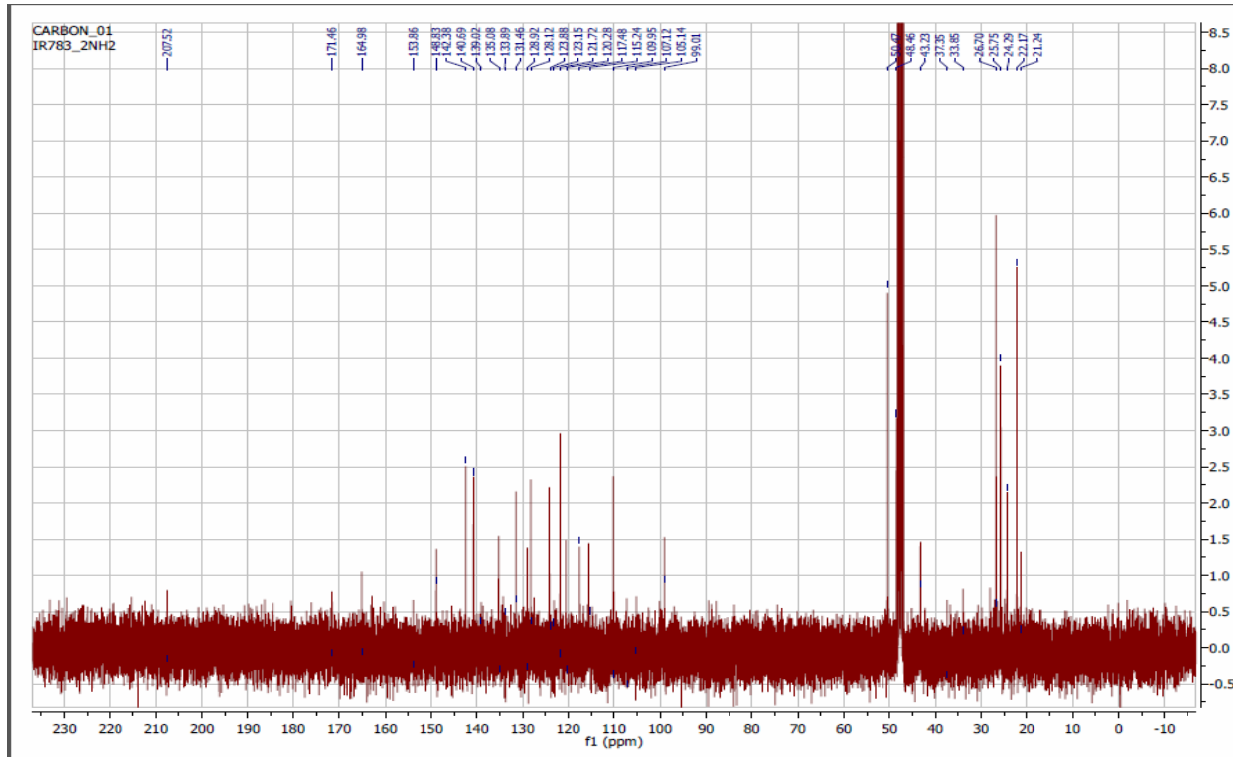
Figure S5 Fluorescence decays of DAP-LT2 before and after reaction with NO

The change in fluorescence lifetime was from 1.02 to 1.05 ns. Ex/em. 740/790 nm, 10% serum/PBS buffer, room temperature

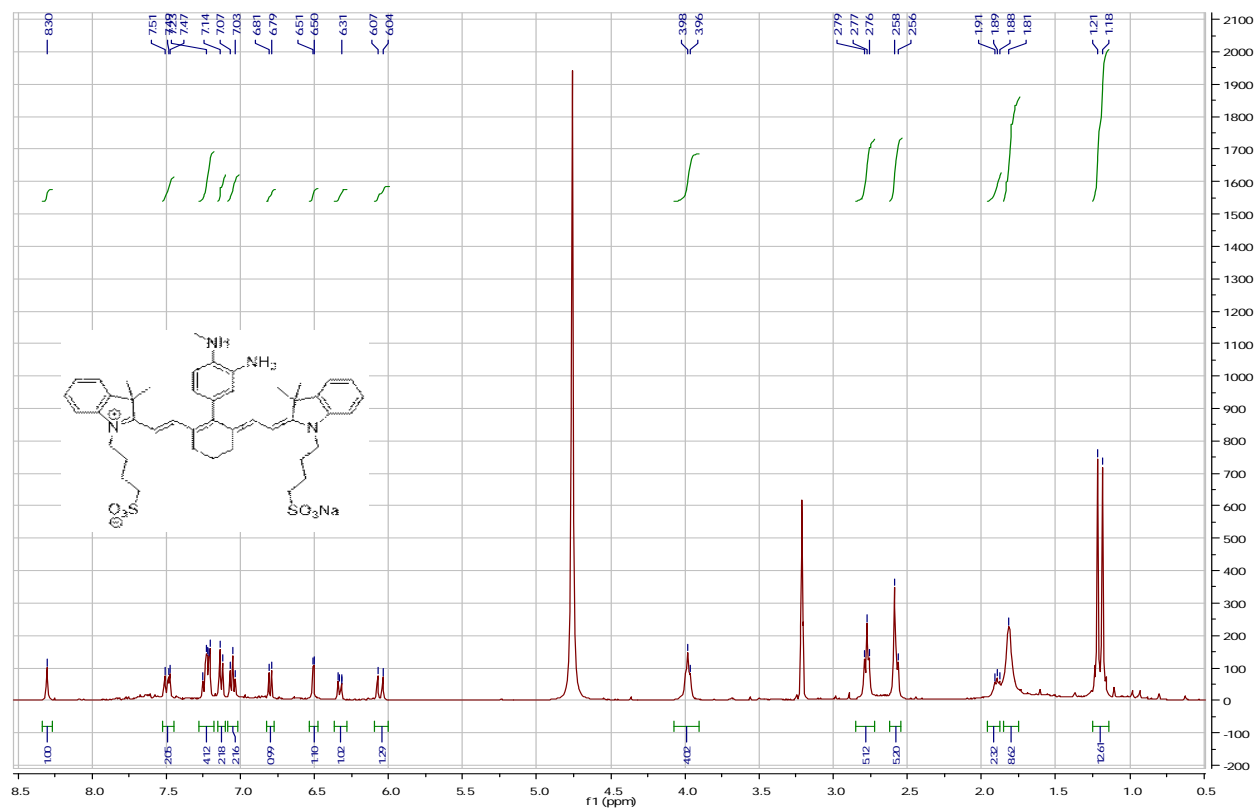
1H NMR DAP-LT1, CD₃OD



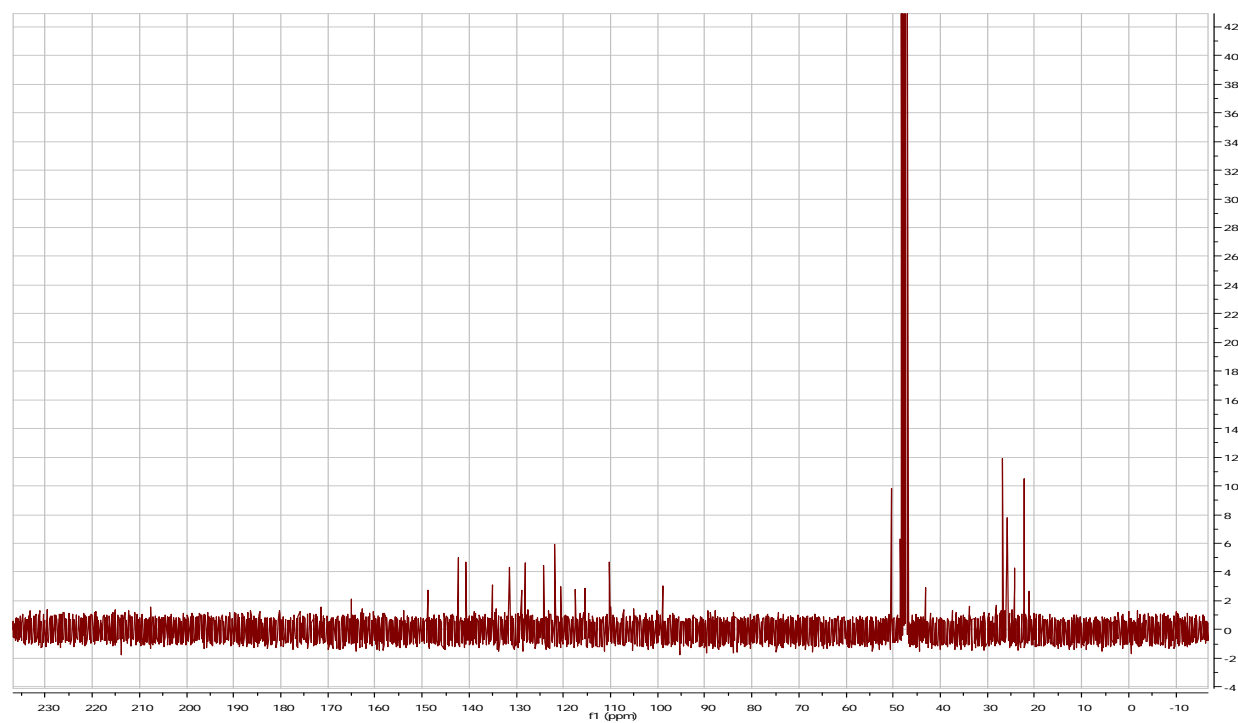
13C NMR DAP-LT1, CD₃OD



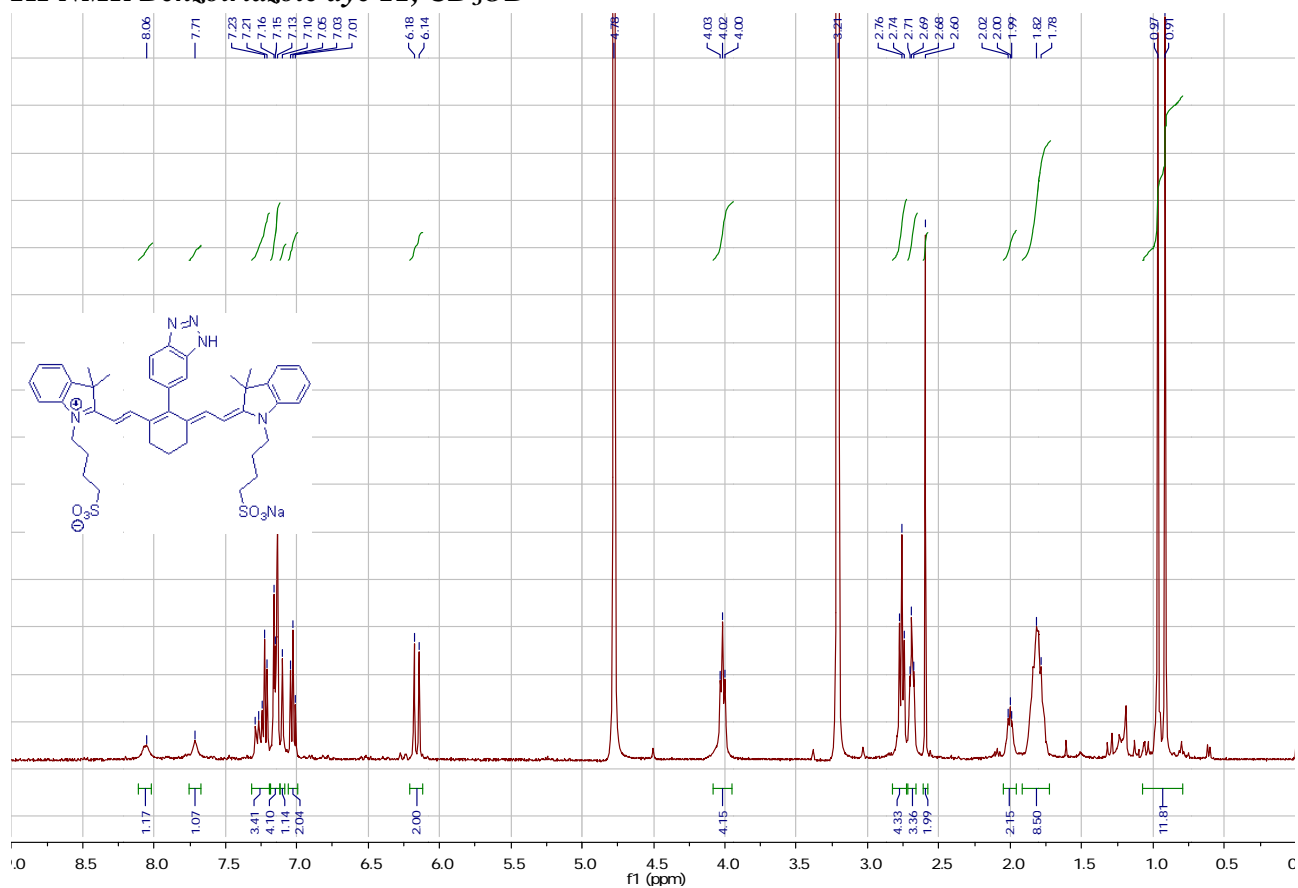
¹H NMR DAP-LT2, CD₃OD



¹³C NMR DAP-LT2, CD₃OD



1H NMR Benzotriazole dye 11, CD₃OD



13C NMR Benzotriazole dye 11, CD₃OD

