

Phototoxicity of BODIPY in long-term imaging can be reduced by intramolecular motion

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Electronic Supplementary Information

Table S1. Refractive indexes n of EtOH, DMSO and toluene used in calculations of fluorescence and singlet oxygen quantum yield.

EtOH	DMSO	Toluene
1.359 34 ^[1]	1.476 8 ^[2]	1.496 7 ^[3]

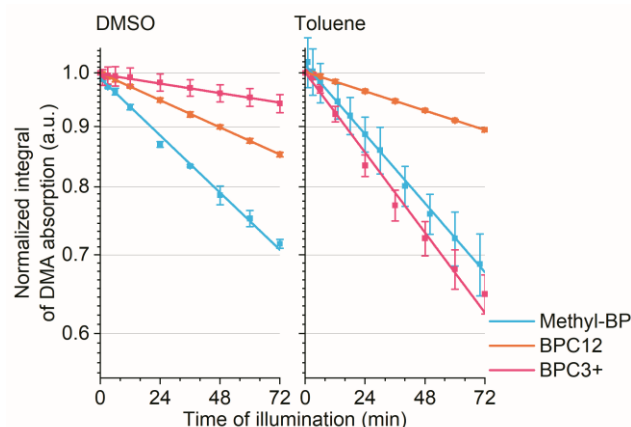


Fig. S1. The averaged normalized integral of the DMA absorption as a function of illumination time in the presence of the studied dyes, Methyl-BP, BPC12 and BPC3+ in DMSO and toluene. Points are presented by mean $\pm$ standard deviations calculated from triplicates. Solid lines are exponential decay fittings.

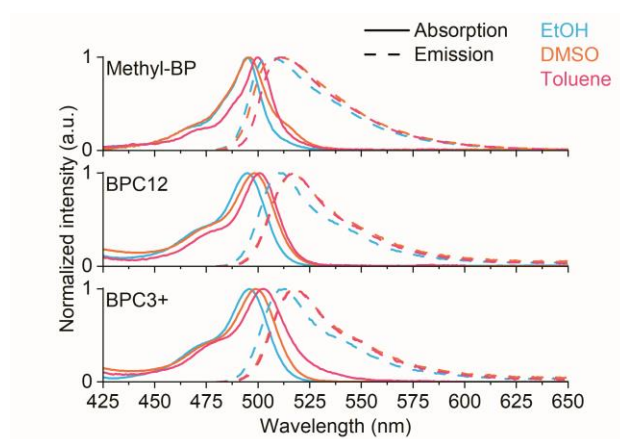


Fig. S2. Absorption and emission spectra of Methyl-BP, BPC12 and BPC3+ in EtOH, DMSO and toluene.

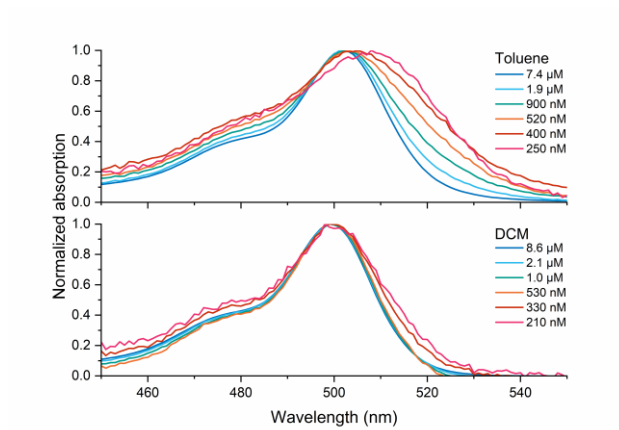


Fig. S3. Absorption spectra for the BPC3+ in toluene and in dichloromethane (DCM).

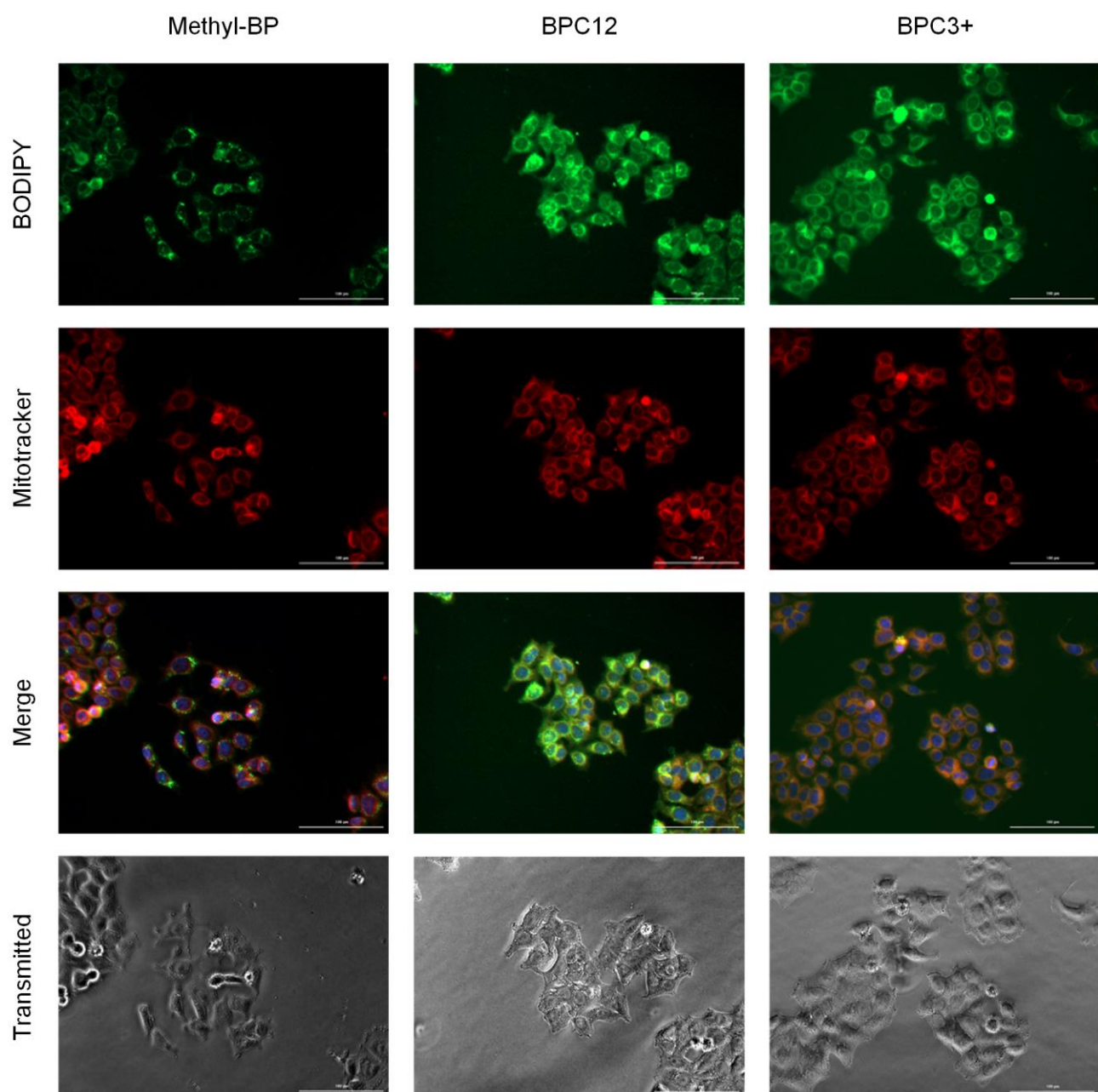


Fig. S4. Co-localization studies by wide-field fluorescence microscopy in HeLa cells. BODIPY, Mitotracker, merged and transmitted channels (downright) for Methyl-BP (right), BPC12 (middle) and BPC3+ (left). Methyl-BP (right) clearly localizes in granular or vesicles distinct from mitochondria. BPC12 (middle) is observed in granules or vesicles, but also in the cytoplasm. BPC3+ (left) localization is like Mitotracker's, therefore suggesting co-localization.

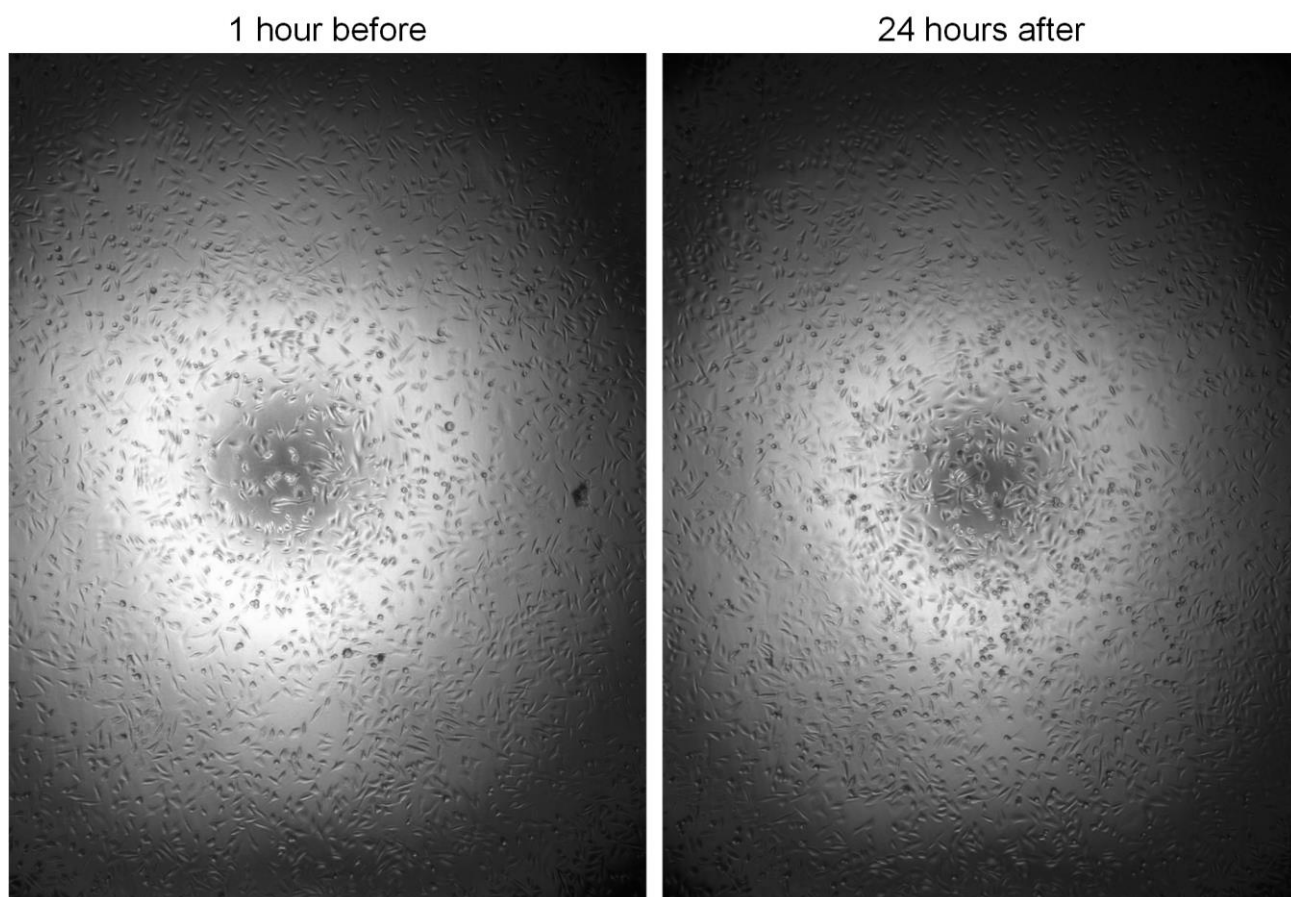


Fig. S5. Light microscope images (4X air objective) of PC-3 cells 1 hour before and 24 hours after 1 % DMSO treatment solution has been added. Meantime cells have been in the dark at + 37 °C and 5 % CO₂.

References

1. Chen, K.-D., Lin, Y.-F., & Tu, C.-H. (2012). Densities, Viscosities, Refractive Indexes, and Surface Tensions for Mixtures of Ethanol, Benzyl Acetate, and Benzyl Alcohol. *Journal of Chemical & Engineering Data*, 57(4), 1118–1127. <https://doi.org/10.1021/je201009c>
2. LeBel, R. G., & Goring, D. A. I. (1962). Density, Viscosity, Refractive Index, and Hygroscopicity of Mixtures of Water and Dimethyl Sulfoxide. *Journal of Chemical & Engineering Data*, 7(1), 100–101. <https://doi.org/10.1021/je60012a032>
3. Haynes, W. M. (Ed.). (2014). *CRC Handbook of Chemistry and Physics* (95th ed.). CRC Press.