List of publications

1. Poronik, Y. M.; Bernas, T.; Wrzosek, A.; Banasiewicz, M.; Szewczyk, A.; Gryko, D. T. ‘One-photon and two-photon mitochondrial fluorescent probes based on a rhodol chromophore’ *Asian J. Org. Chem*. **2018**, *7*, 411-415. DOI:10.1002/ajoc.201700600.
2. Tasior, M.; Hassanein, K.; Mazur, L. M.; Sakellari, I.; Gray, D.; Farsari, M.; Samoć, M.; Santoro, F.; Ventura, B.; Gryko, D. T. ‘The role of intramolecular charge transfer and symmetry breaking in the photophysics of pyrrolo[3,2-*b*]pyrrole-dione’, *Phys. Chem. Chem. Phys*. **2018**, *20*, 22260-22271. DOI:10.1039/C8CP03755H.
3. Stężycki, R.; Reger, D.; Hoelzel, H.; Jux, N.; Gryko, D. T. **‘**Synthesis and photophysical properties of hexaphenylbenzene-pyrrolo[3,2-*b*]pyrroles’, *Synlett* 2018, *29*, 2529-2534. DOI:10.1055/s-0037-1610286.
4. Sadowski, B.; Loebnitz, M.; Dombrowski, D. M.; Friese, D. H.; Gryko, D. T. ‘Electron-rich dipyrrolonaphthyridinediones: synthesis and optical properties’, *J. Org. Chem.* **2018**, *83*, 11645-11653. DOI:10.1021/acs.joc.8b01615.
5. Sadowski, B.; Su, S.-H.; Lin, T.-C.; Lohrey, T. D.; Deperasińska, I.; Chou, P.-T.; Gryko, D. T. ‘The influence of tetraphenylethylene moieties on the emissive properties of dipyrrolonaphthyridinediones’, *J. Mat. Chem. C* **2018**, *6*, 12306-12313. DOI:10.1039/C8TC03880E.
6. Tasior, M.; Clermont, G.; Blanchard-Desce, M.; Jacquemin, D.; Gryko, D. T. ‘Synthesis of bis(arylethynyl)pyrrolo[3,2-*b*]pyrroles and an effect of intramolecular charge-transfer on their photophysical behavior’, *Chem. Eur. J*. **2019**, *25*, 598-608. DOI: 10.1002/chem.201804325.
7. Banasiewicz, M.; Stężycki, R.; Kumar, G. D.; Krzeszewski, M.; Tasior, M.; Koszarna, B.; Janiga, A.; Vakuliuk, O.; Sadowski, B.; Gryko, D. T.; Jacquemin, D. ‘Electronic communication in pyrrolo[3,2-*b*]pyrroles possessing sterically hindered aromatic substituents’, *Eur. J. Org. Chem*. **2019**, 5247-5253. DOI:10.1002/ejoc.201801809.
8. Kielesiński, Ł.; Morawski, O. W.; Sobolewski, A. L.; Gryko, D. T. ‘The synthesis and photophysical properties of tris-coumarins’, *Phys. Chem. Chem. Phys*. **2019**, *21*, 8314-8325. DOI:10.1039/C9CP00978G.
9. Tasior, M.; Koszarna, B.; Young, D. C.; Bernard, B.; Jacquemin, D.; Gryko D.; Gryko, D. T. ‘Fe(III)-catalyzed synthesis of pyrrolo[3,2-*b*]pyrroles: formation of new dyes and photophysical studies’, *Org. Chem. Front*. **2019**, *6*, 2939-2948. DOI:10.1039/C9QO00675C.
10. Bardi, B.; Krzeszewski, M.; Gryko, D. T.; Painelli, A.; Terenziani, F. ‘Excited-state symmetry breaking in an aza-nanographene dye’, *Chem. Eur. J*. **2019**, *25*, 13930-13938. DOI:10.1002/chem.201902554.
11. Vakuliuk, O.; Jun, Y. W.; Vygranenko, K.; Clermont, G.; Reo, Y. J.; Blanchard-Desce, M.; Ahn, K. H.; Gryko, D. T. ‘Modified isoindolediones as bright fluorescent probes for cell and tissue imaging’, *Chem. Eur. J*. **2019**, *25*, 13354-13362. DOI:10.1002/chem.201902534.
12. Poronik, Y. M.; Vygranenko, K. V.; Gryko, D.; Gryko, D. T. ‘Rhodols – synthesis, chemical and optical properties and applications as fluorescent probes’, *Chem. Soc. Rev*. **2019**, *48*, 5242-5265. DOI:10.1039/C9CS00166B.
13. Kielesiński, Ł.; Gryko, D. T.; Sobolewski, A. L.; Morawski, O. W. ‘Interplay between solvation and stacking of aromatic rings governs bright and dark sites of benzo[*g*]coumarins’, *Chem. Eur. J*. **2019**, *25,* 15305-15314. DOI:10.1002/chem.201903018.
14. Sadowski, B.; Stewart, D. J.; Phillips, A. T.; Grusenmeyer, T. A.; Haley, J. E.; Cooper**, T. M.;** Gryko**, D. T.** ‘From dipyrrolonaphthyridinediones to quinazolinoindolizinoindolizinoquinazolines’, *J. Org. Chem*. **2020**, *85*, 284-290. DOI:10.1021/acs.joc.9b00839.
15. Kim, T.; Kim, W.; Vakuliuk, O.; Gryko, D. T.; Kim, D. ‘Two-step charge-separation passing through the partial charge-transfer state in a molecular dyad’, *J. Am. Chem. Soc*. **2020**, *142*, 1564-1573. DOI:10.1021/jacs.9b12016.
16. Benkyi, I.; Staszewska-Krajewska, O.; Gryko, D. T.; Jaszuński, M.; Stanger, A.; Sundholm, D. ‘The interplay of aromaticity and antiaromaticity in N-doped nanographenes’, *J. Phys. Chem. A* **2020**, *124*, 695-703. DOI:10.1021/acs.jpca.9b11315.
17. Grzybowski, M.; Sadowski, B.; Butenschön, H.; Gryko, D. T. ‘Synthetic applications of oxidative aromatic coupling – from biphenols to nanographenes’, *Angew. Chem. Int. Ed*. **2020**, *59*, 2998-3027. DOI:10.1002/anie.201904934.
18. Hatanaka, S.; Ono, T.; Yano, Y.; Gryko, D. T.; Hisaeda, Y. ‘Tris(pentafluorophenyl)borane‐pyrrolo[3,2‐*b*]pyrrole hybrids: solid‐state structure and crystallization‐induced enhanced emission’, *ChemPhotoChem* **2020**, *4*, 138-143. DOI:10.1002/cptc.201900192.
19. Pieczykolan, M.; Sadowski, B.; Gryko, D. T. ‘The ultimate method for the programmed synthesis of multifunctional diketopyrrolopyrroles’, *Angew. Chem. Int. Ed*. **2020**, *59,* 7528-7535. DOI:10.1002/anie.201915953.
20. Łukasiewicz, Ł. G.; Rammo, M.; Stark, C.; Krzeszewski, M.; Jacquemin, D.; Rebane, A.; Gryko, D. T. *‘*Ground- and excited state symmetry breaking and solvatofluorochromism in centrosymmetric pyrrolo[3,2-b]pyrroles possessing two nitro groups’, ChemPhotoChem **2020**, 4, 508-519. DOI:10.1002/cptc.202000013.
21. Gutkowski, K.; Skonieczny, K.; Bugaj, M.; Jacquemin, D.; Gryko, D. T., ‘First method for *N*-arylation of diketopyrrolopyrroles with aryl triflates’, *Chem. Asian. J.* **2020**, *15*, 1369-1375. DOI:10.1002/asia.202000129.
22. Morawski, O. W.; Kielesiński, Ł.; Gryko, D. T.; Sobolewski, A. L., ‘Highly polarized coumarin derivatives revisited: solvent-controlled competition between proton coupled electron transfer and twisted intramolecular charge transfer’, *Chem. Eur. J*. **2020**, *26,* 7281-7291. DOI:10.1002/chem.202001079.
23. Poronik, Y. M.; Ambicki, F.; Tseng, S.-M.; Chou, P.-T.; Deperasińska, I.; Gryko, D. T. ‘How an eight-membered ring alters the rhodamine chromophore’, *J. Org. Chem.* **2020**, *85*, 5973-5980. DOI:10.1021/acs.joc.0c00414.
24. Young, D. C.; Tasior, M.; Laurent, A. D.; Dobrzycki, Ł.; Cyrański, M. K.; Tkachenko, N.; Jacquemin,D.; Gryko, D. T. ‘Photostable orange-red fluorescent unsymmetrical diketopyrrolopyrrole-BF2 hybrids’, *J. Mater. Chem. C* **2020**, *8*, 7708-7717. DOI:10.1039/D0TC01202E.
25. Qin, Y.; Schnedermann, C.; Tasior, M.; Gryko, D. T.; Nocera, D. G. ‘Direct observation of different one- and two-photon fluorescent states in a pyrrolo[3,2-*b*]pyrrole fluorophore’ *J. Phys. Chem. Lett.* **2020**, *11*, 4866-4872. DOI:10.1021/acs.jpclett.0c00669.
26. Skonieczny, K.; Papadopoulos, I.; Thiel, D.; Gutkowski, K.; Haines, P.; McCosker, P. M.; Laurent, A. D.; Keller, P. A.; Clark, T.; Jacquemin, D.; Guldi, D. M.; Gryko, D. T. ‘How to make nitroaromatics glow: next generation large, χ—shaped, centrosymmetric diketopyrrolopyrroles’, *Angew. Chem. Int. Ed*. **2020**, *59,* 16104-16113. DOI:10.1002/anie.202005244.
27. Tasior, M.; Vakuliuk, O.; Koga, D.; Koszarna, B.; Górski, K.; Grzybowski, M.; Kielesiński, Ł.; Krzeszewski, M.; Gryko, D. T. ‘An efficient method for the large scale synthesis of multifunctional 1,4-dihydro-pyrrolo[3,2-*b*]pyrroles’, *J. Org. Chem*. **2020**, *85*, 13529-13543. [DOI:10.1021/acs.joc.0c01665](https://doi.org/10.1021/acs.joc.0c01665%22%20%5Co%20%22DOI%20URL).
28. Poronik, Y. M.; Baryshnikov, G. V.; Deperasińska, I.; Espinoza, E. M.; Clark, J. A.; Ågren, H.; Gryko, D. T.; Vullev, V. I.‘Deciphering the enigma of unusual fluorescence in weakly coupled bis-nitro-pyrrolo[3,2-*b*]pyrroles’, *Commun. Chem.* **2020**, *3*, 190. DOI:10.1038/s42004-020-00434-6.
29. Kumar, G. D.; Banasiewicz, M.; Jacquemin, D.; Gryko, D. T. ‘Switch-on diketopyrrolopyrrole-based chemosensors for cations possessing Lewis acid character’, *Chem. Asian J*. **2021**, *16*, 355-362. DOI: 10.1002/asia.202001376.
30. Kielesiński, Ł.; Morawski, O. W.; Barboza, C. A.; Gryko, D. T. ‘Polarized helical coumarins: [1,5] sigmatropic rearrangement and excited-state intramolecular proton transfer’, *J. Org. Chem.* **2021**, *86*, 6148-6159. DOI: 10.1021/acs.joc.0c02978.
31. Krzeszewski, M.; Dobrzycki, Ł.; Sobolewski, A. L.; Cyrański, M. K.; Gryko, D. T.’Bowl-shaped pentagon- and heptagon-embedded nanographene build on a central pyrrolo[3,2-*b*]pyrrole core’, *Angew. Chem. Int. Ed*. **2021**, *60*, 14998-15005. DOI:10.1002/anie.202104092.
32. Vygranenko, K. V.; Poronik, Y. M.; Wrzosek, A.; Szewczyk, A.; Gryko, D. T. ‘Red emissive sulfone-rhodols as mitochondrial imaging agents’, *Chem. Comm.* **2021**, *57*, 7782-7785. DOI:10.1039/D1CC02687A.
33. Górski, K.; Deperasińska, I.; Baryshnikov, G. V.; Ozaki, S.; Kamada, K.; Ågren, H.; Gryko, D. T. ‘Quadrupolar dyes based on highly polarized coumarins’, *Org. Lett*. **2021**, *23*, 6770−6774. DOI:10.1021/acs.orglett.1c02349.
34. Krzeszewski, M.; Tasior, M.; Grzybowski, M.; Gryko, D. T. ‘Synthesis of tetraaryl-, pentaaryl-, and hexaaryl-1,4-dihydropyrrolo[3,2-*b*]pyrroles’ *Org. Synth*. **2021**, *98*, 242-262. DOI:10.15227/orgsyn.098.0242.
35. Hupfer, M. L.; Koszarna, B.; Ghosh, S.; Gryko, D. T.; Presselt, M. ‘Langmuir−Blodgett films of diketopyrrolopyrroles with tunable amphiphilicity’, *Langmuir* **2021**, *37*, 10272−10278. DOI:10.1021/acs.langmuir.1c01113.
36. Pieczykolan, M.; Derr, J. B.; Chrayteh, A.; Koszarna, B.; Clark, J. A.; Vakuliuk, O.; Jacquemin, D.; Vullev, V. I.; Gryko, D. T. ‘The synthesis and photophysical properties of weakly coupled diketopyrrolopyrroles’, *Molecules* **2021**, *26*, 4744. DOI:10.3390/molecules26164744.
37. Sadowski, B.; Kaliszewska, M.; Poronik, Y. P.; Czichy, M.; Janasik, P.; Banasiewicz, M.; Mierzwa,D.;Gadomski,W.; Lohrey, T. D.; Clark, J. A.; Łapkowski, M.; Kozankiewicz, B.; Vullev,V. I.; Sobolewski, A. L.; Piątkowski, P.; Gryko, D. T. ‘Strategy towards strongly emissive nitroaromatics through a weakly electron-deficient core’, *Chem. Sci*. **2021**, *12*, 14039-14049. DOI:10.1039/D1SC03670J.
38. Tasior, M.; Kowalczyk, P.; Przybył, M.; Czichy, M.; Janasik, P.; Bousquet, M. H. E.; Łapkowski, M.; Rammo, M.; Rebane, A.; Jacquemin, D.; Gryko, D. T. ‘Going beyond the borders: pyrrolo[3,2-*b*]pyrroles with deep red emission’, *Chem. Sci*. **2021**, ***12***, 15935-15946.DOI:10.1039/D1SC05007A.
39. Poronik, Y. M.; Sadowski, B.; Szychta, K.; Quina, F. H.; Vullev V. I.; Gryko, D. T. ‘Revisiting the non-fluorescence of nitroaromatics: presumption versus reality’, *J. Mater. Chem C* **2022**, *10*, 2870-2904. DOI:10.1039/d1tc05423f.
40. Kumar, G. D.; Banasiewicz, M.; Wrzosek, A.; Kampa, R. P.; Bousquet, M. H. E.; Kusy, D.; Jacquemin, D.; Szewczyk, A.; Gryko, D. T. ‘Probing flux of mitochondrial potassium using an azacrown-diketopyrrolopyrrole based highly sensitive probe, *Chem. Commun.* **2022**, *58*, 4500-4503. DOI:10.1039/D2CC00324D.
41. Kowalczyk, P.; Tasior, M.; Ozaki, S.; Kamada, K.; Gryko, D. T. ‘From 2,5-diformyl-1,4-dihydropyrrolo[3,2-*b*]pyrroles to quadrupolar, centrosymmetric two-photon-absorbing A-D-A dyes’, *Org. Lett*. **2022**, *24*, 2551-2555. DOI:10.1021/acs.orglett.2c00718.
42. Megahd, H.; Lova, P.; Sardar, S.; D'Andrea, C.; Lanfranchi, A.; Koszarna, B.; Patrini, M.; Gryko, D. T.; Comoretto, D. ‘All-polymer microcavities for fluorescence radiative rate modification of a diketopyrrolopyrrole derivative’, *ACS Omega* **2022**, *7*, 15499-15506. DOI:10.1021/acsomega.2c00167.
43. Stecko, S.; Gryko, D. T. ‘Multifunctional heteropentalenes: from synthesis to optoelectronic applications’, *JACS Au* **2022**, *2*, 1290-1305. DOI: 10.1021/jacsau.2c00147.
44. Krzeszewski, M.; Modrzycka, S.; Bousquet, M. H. E.; Jacquemin, D.; Drąg, M.; Gryko, D. T. ‘Green-emitting 4,5-diaminonaphthalimides in activity-based probes for the detection of thrombin’, *Org. Lett*. **2022**, *24*, 5602-5607. DOI:10.1021/acs.orglett.2c02320.
45. Kumar, G. D.; Banasiewicz, M.; Wrzosek, A.; O’Mari, O.; Zochowska, M.; Vullev, V. I., Jacquemin, D.; Szewczyk, A.; Gryko, D. T. ‘A sensitive zinc probe operating via enhancement of excited-state intramolecular charge transfer’, *Org. Biomol. Chem*. **2022**, *20*, 7439-7447. DOI:10.1039/D2OB01296K.
46. Sanil, G.; Koszarna, B.; Poronik, Y. M.; Vakuliuk, O.; Szymański, B.; Kusy, D.; Gryko, D. T. ‘The chemistry of 1,4-dihydropyrrolo[3,2-*b*]pyrroles’ *Adv. Heterocyc. Chem.* **2022**, *138*, 335-409. DOI:10.1016/bs.aihch.2022.04.002.