Photochemical & Photobiological Sciences

ROYAL SOCIETY OF CHEMISTRY

CORRECTION

View Article Online
View Journal | View Issue

Cite this: *Photochem. Photobiol. Sci.*, 2020, **19**, 858

Correction: Role of solute-solvent hydrogen bonds on the ground state and the excited state proton transfer in 3-hydroxyflavone. A systematic spectrophotometric study

Simone Lazzaroni,[a,b] Daniele Dondi,[a] Alberto Mezzetti*[c] and Stefano Protti*[d]

DOI: 10.1039/d0pp90017f

rsc.li/pps

Correction for 'Role of solute-solvent hydrogen bonds on the ground state and the excited state proton transfer in 3-hydroxyflavone. A systematic spectrophotometric study' by Simone Lazzaroni *et al.*, *Photochem. Photobiol. Sci.*, 2018, **17**, 923–933, DOI: 10.1039/C8PP00053K.

The authors would like to correct Table 1 as, upon further examination of the fluorescence spectra and fluorescence excitation spectra, they noticed that the position of the peak is not well-defined. This may be due to a series of factors: (1) simultaneous presence, in the same solution, of three different emission peaks (N*, T*, A*). The authors decided not to use any deconvolution or band decomposition procedure for reasons that will be explained in point (3) below. This may lead to some uncertainty (±~3 nm) especially when the A* band is present. (2) Presence of Raman peak(s) from the solvent which overlap with the emission peaks, leading to some uncertainty around the exact position of the latter. (3) Presence of subpopulations of species (especially of the A* form, as previously noticed),[1,2] each one characterized by slightly different emission and absorption peaks.

Slight discrepancies compared to literature values are most likely due to differences in the excitation wavelength (for the emission spectra) or the chosen emission wavelength (for the fluorescence excitation spectra). Given the strict protocols which were followed for solvent purification and 3HF purification, the authors exclude any contributions from impurities, moisture, or other contaminants.

The correct Table 1 is shown below with the corrected values for the following: $\lambda_{em(N)}$ in ethyl acetate, acetonitrile, 1,4-dioxane, tetrahydrofuran, methanol, formamide and *N*-methyl formamide; $\lambda_{em(T)}$ in chloroform; $\lambda_{em(A)}$ in acetone, ethanol and formamide; and $\lambda_{ex(A)}$ in tetrahydrofuran, acetone, methanol, iso-propanol, 2-methoxyethanol, formamide, *N*-methylformamide and *N*,*N*-dimethylformamide.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

[a]*Radchem Lab, Department of Chemistry, University of Pavia, Via Taramelli 10, Italy*
[b]*Laboratory of Applied Nuclear Energy, LENA, University of Pavia, Via Aselli 41, 27100 Pavia, Italy*
[c]*Laboratoire de Réactivité de Surface UMR CNRS 7197, Sorbonne Université, Faculté de Sciences et Ingénierie, Tour 43-53, 3ème étage, 4 Pl Jussieu, 75005 Paris, France. E-mail: alberto.mezzetti@upmc.fr*
[d]*PhotoGreen Lab, Department of Chemistry, University of Pavia, Via Taramelli 12, 27100 Pavia, Italy. E-mail: stefano.protti@unipv.it*

Table 1 Photophysical parameters for 3HF in different solvents. In parenthesis, the quantum yields are indicated

Solvent	$\lambda_{em(N)}$ (Φ_N)	$\lambda_{em(T)}$ (Φ_T)	$\lambda_{em(A)}$ (Φ_A)	$\lambda_{ex(A)}$
Aqueous solution				
NaOH (0.1 M)	—	—	519 (0.002)	400
Alkanes				
n-Pentane	—	530 (0.37)	—	—
i-Pentane	—	528 (0.32)	—	—
2,2,4-Trimethylpentane	—	523 (0.31)	—	—
n-Hexane	—	529 (0.33)	—	—
Cyclohexane	—	527 (0.28)	—	—
Aromatics				
Benzene	—	536 (0.23)	—	—
Toluene	—	530 (0.29)	—	—
Haloaliphatics				
Dichloromethane	—	528 (0.18)	—	—
Chloroform	400 ($<10^{-3}$)	532 (0.19)	—	—
Carbon tetrachloride	—	523 (0.24)	—	—
Esters				
Ethyl acetate	387 (0.0027)	529 (0.067)	—	—
Nitriles				
Acetonitrile	395 (0.0008)	525 (0.06)	468 (0.096)	420
Ethers				
1,4-Dioxane	394 (0.0028)	530 (0.067)	474 (0.055)	413
Diethyl ether	400 (0.0025)	537 (0.042)	474 (0.052)	412
Tetrahydrofuran	403 (0.001)	538 (0.040)	485 (0.119)	404
Ketones				
Acetone	400 (0.0048)	530 (0.030)	481 (0.046)	420
Alcohols				
Methanol	406 (0.009)	528 (0.017)	481 (0.029)	410
Ethanol	406 (0.0056)	531 (0.018)	478 (0.010)	414
i-Propanol	404 (0.0049)	532 (0.041)	495 (0.021)	411
2-Methoxyethanol	403 (0.009)	539 (0.053)	488 (0.018)	406
Triethylene glycol monomethyl ether	406 (0.0079)	540 (0.067)	484 (0.053)	411
2,2,2-Trifluoroethanol	407 (0.024)	503 (0.046)	—	—
Amides				
Formamide	406 (0.006)	526 (0.023)	490 (0.016)	412
N-Methylformamide	402 (0.009)	529 (0.035)	483 (0.130)	407
N,*N*-Dimethylformamide	400 (0.003)	539 (0.024)	492 (0.096)	431 (a twin peak at 417 nm)
Sulfoxides				
Dimethylsulfoxide	400 (0.0015)	534 (0.008)	502 (0.034)	428

References

1 D. Loco, S. Protti, B. Mennucci and A. Mezzetti, *J. Mol. Struct.*, 2019, **1182**, 283–291.
2 B. Dereka, R. Letrun, D. Svechkarev, A. Rosspeintner and E. Vauthey, *J. Phys. Chem. B*, 2015, **119**, 2434–2443.