Short Term Scientific Mission funded by the COST Action CA22131

Supramolecular LUminescent Chemosensors for Environmental Security

Polymer 2dorthogonal sensors with higly chemoselective responses to micropollutants

Aim of the STSM

Optical characterisation of polymer-based sensing systems for tetracycline detection.



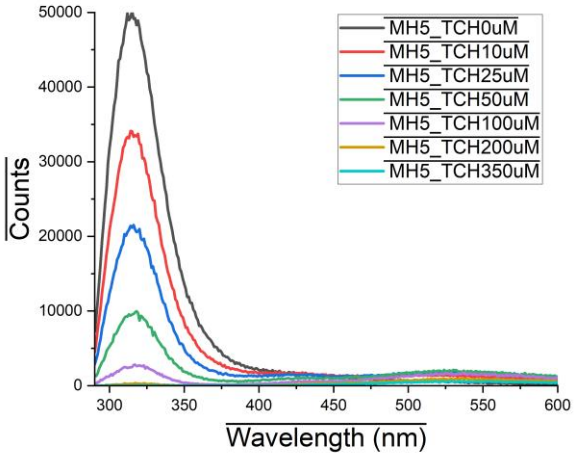
Prepared polymer systems: MH5, MH6 and MH7

Work performed

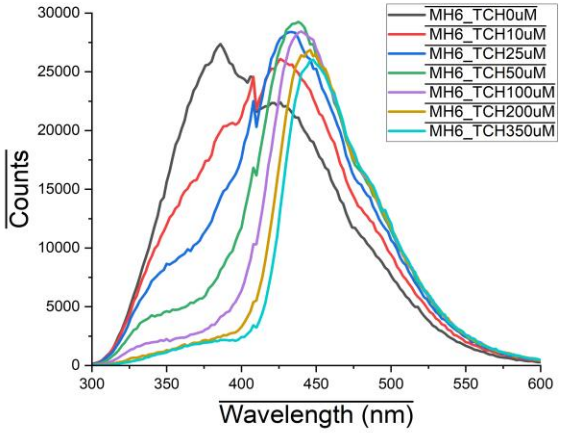
Three polymer systems – P(L-DOPA)/Zn (MH5), P(L-DOPA)/Ca (MH6), and P(L-DOPA) (MH7) – were prepared and analysed by UV-Vis spectroscopy, excitation-emission matrices (EEMs), and fluorescence spectroscopy.

Main outcomes

All systems responded to tetracycline. MH5 and MH7 showed fluorescence quenching, while MH6 exhibited spectral changes and a red shift. The results support further development of 2D-orthogonal optical/electrochemical sensing.



MH5: Concentration-dependent fluorescence quenching



MH6: Concentration-dependent spectral shift

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