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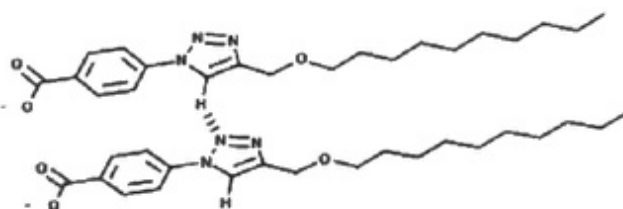
## Physicochemical and Fluorescence Behavior of Self-Aggregate Triazolyl Benzoic Acid Amphiphilic Molecules

Hairul Anuar Tajuddin,\* Nurul Faiezin Zul, Ahmad Bayhaki Sadidarto, Noraini Ahmad and Zanariah Abdullah

Department of Chemistry, Faculty of Science, University of Malaya, 50603 Kuala Lumpur, Malaysia

E-mail: hairul@um.edu.my

Self-aggregate molecules closely related to amphiphilic structures constructed of distinguish polar and non-polar regions that involve at least hydrophobic-hydrophobic and electrostatic interactions. Heteroaromatic moieties embedded in the amphiphilic molecules, however, might offer additional interactions that could exist from  $\pi$ -conjugation and resonances. Triazolyl produced from “click” reaction was chosen as a heteroaromatic linker between the hydrophobic and hydrophilic regions. Fluorescence emission of the synthesized amphiphilic and other parameters have been exploited to investigate the most probable interactions exist in the self-aggregation structures including micelle, vesicle and monolayer. The amphiphile in basic aqueous condition has shown significant increase of emission intensities at above the critical micellar concentration (c.m.c.) value and drastically reduces c.m.c. value compared to natural salts of fatty acids with similar length. The presence of triazolyl moiety also drives the molecule to form bilayer at higher pH that stabilize the aggregation probably either by hydrogen bonding among the triazolyl or  $\pi$ - $\pi$  interaction. These examples of self-aggregations demonstrate the outstanding functions of both aromatic and heterocyclic groups in an amphiphilic molecule additional to the conventional electrostatic and hydrophobic interactions.



### References

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Hairul Anuar Tajuddin. University of Malaya (BScEd, 1999, MSc, 2003, PhD, 2007). Senior Lecturer (2010). Associate Professor (2016). Physical Organic Chemistry and Synthesis of Organic Materials.