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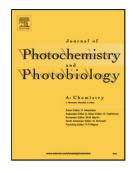
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### ACCEPTED MANUSCRIPT

# Study of electron transfer process in aqueous methanol system by using tryptophan based short peptide – amino acid pairs

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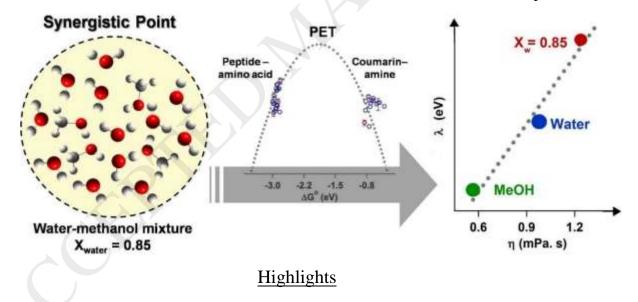
#### **Graphical Abstract**

# Study of electron transfer process in aqueous methanol system by using tryptophan based short peptide – amino acid pairs

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**Graphical Abstract:** The present study demonstrated the nature of synergistic solvation behaviour in water – methanol binary solvent mixture and its role on photo-induced electron transfer (PET) process during the interactions of different tryptophan based peptide conjugates with selected non-aromatic amino acids and also with standard coumarins – amines pairs.



- Synergistic solvation was observed in the water-alcohol binary solvent mixture.
- The mixture is high polarity in nature than pure water and methanol.
- PET process was studied by using short peptide-amino acids and standard coumarins amines pairs.
- The PET event significantly depends upon the physical properties of solvents.

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