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Enhancement of absorption properties of interlocked dye films of di octadecyl Merocyanine with octadecyl Rhodamine prepared by Langmuir and Blodegett (LB) technique

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The possibility to control the J- aggregates formed during film formation by LB technique by interlocking was investigated.

Compressing the dye layer on air-water interface causes reduction of surface area of the dye layer. The surface area corresponding to various values of surface pressure can be represented graphically, called surface pressure area isotherm.

Surface pressure area Isotherms of di octadecyl Merocyanine (C_{18}-Mero-C_{18}), octadecyl Rhodamine (R-C_{18}) and their 1:1 mixture confirmed the interlocking of octadecyl Rhodamine dye between two hydrocarbon chains of di octadecyl Merocyanine molecules. Interlocking minimise the formation of J-aggregates.

The absorption properties of the films will improve considerably when two dyes are interlocked to each other.

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