

layers of lipid mixtures, of lipid–protein alloys and of two-dimensional solutions has been studied by different spectroscopic methods, by neutron scattering and by freeze etch electron microscopy. The molecular transport in the plane of the membrane as well as the exchange of molecules between different lipid lamellae is studied by fluorescence spectroscopic techniques.

As a further point the possibility of specific lipid–protein interactions based on elastic and electrostatic forces is reported. The role of defects in the neighbourhood of proteins or at phase boundaries as attractive centres for small molecules is discussed.

Order Parameters and Orientational Dynamics of Fluorescent Solutes in Anisotropic Fluids

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There have been, in the past, a number of experimental works aimed at determining the orientational

order parameters $\langle P_2 \rangle$ and $\langle P_4 \rangle$ of fluorescent solutes by polarization methods [1]. In this communication the problem of the information available in a fluorescence polarization experiment is discussed from a general point of view. The fluorescence intensities are obtained at first as a function of time [2]. While these expressions can be used to interpret time resolved depolarization experiments they can also be used, when integrated over time, to analyze the more common continuous illumination type experiments [1]. The importance of the relative time scales of the fluorescence decay and reorientation processes is discussed.

The treatment is extended to angular dependent experiments where the polarizer on the incoming or outgoing beam or the director [3] are rotated.

References

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