TABLE OF CONTENTS

- Description p.1
- Audience p.1
- Abstracting and Indexing p.1
- Editorial Board p.2
- Guide for Authors p.5

DESCRIPTION

*Chemistry and Physics of Lipids* publishes research papers and review articles on *chemical* and *physical* aspects of *lipids* with primary emphasis on the relationship of these properties to *biological functions* and to *biomedical applications*.

Accordingly, the journal covers: advances in synthetic and analytical lipid methodology; mass-spectrometry of lipids; chemical and physical characterisation of isolated structures; thermodynamics, phase behaviour, topology and dynamics of lipid assemblies; physicochemical studies into lipid-lipid and lipid-protein interactions in lipoproteins and in natural and model membranes; movement of lipids within, across and between membranes; intracellular lipid transfer; structure-function relationships and the nature of lipid-derived second messengers; chemical, physical and functional alterations of lipids induced by free radicals; enzymatic and non-enzymatic mechanisms of lipid peroxidation in cells, tissues, biofluids; oxidative lipidomics; and the role of lipids in the regulation of membrane-dependent biological processes.

Reviews, full articles and short communications will be considered for publication in each issue. Special Issues will consist of invited contributions organized and edited to cover specific themes.

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Lipids and signal transduction, NMR of membranes, protein-lipid interactions, molecular interactions in lipid membranes/ DSC, FT-IR and SAXS studies of lipid model membranes.

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Alzheimer's disease, Brain Lipids, Cardiolipin, Lipidomics, Lipids/Chemistry, Mass spectrometry, Membranes/Fluidity, Phospholipids, Plasmalogens, Sphingolipids.

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Lipid signalling, sphingolipids.

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Phospholipid, lipid and lipoprotein metabolism

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Biomembranes, MD simulations, X-ray and neutron scattering

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Oxidative stress and antioxidants, Phospholipid peroxidation, Self-assembly of mixtures of amphiphiles in aqueous solutions

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Lipids and atherosclerotic plaques, lipid regulation of vascular calcification, lipid imaging.

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Lipid oxidation, free radical mechanisms, mass spectrometry.

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Liposomes, lipoproteins, nanomedicine, biophysical techniques

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Ayyalusamy Ramamoorthy, Ann Arbor, Michigan, United States of America
Amyloid, membrane biophysics, lipid-protein interaction, lipid structure, alpha-synuclein (a-synuclein), membrane bilayer, membrane reconstitution, amyloid precursor protein (APP), membrane protein, lipid binding protein, antimicrobial peptide (AMP), cytochrome P450, nuclear magnetic resonance (NMR), protein misfolding, solid state NMR, amyloid-beta (AB), Nanodiscs

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Lipid domains, microscopy.
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Molecular organization in lipid bilayers, Polyunsaturated fatty acids (PUFA), Solid state NMR
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INTRODUCTION

Chemistry and Physics of Lipids publishes research papers and review articles in the field of molecular biology which emphasise chemical and physical aspects of lipids. Accordingly, the journal covers: advances in synthetic and analytical lipid methodology; chemical and physical characterisation of isolated structures; thermodynamics, phase behaviour, topology and dynamics of lipid assemblies; physicochemical studies into lipid-lipid and lipid-protein interactions in lipoproteins and in natural and model membranes; movement of lipids within, across and between membranes; intracellular lipid transfer; structure-function relationships and the nature of lipid-derived second messengers; chemical, physical and functional alterations of lipids induced by free radicals; and the role of lipids in the regulation of membrane-dependent biological processes.

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