

Fluorescence Spectroscopy and its Applications

FOREWORD

Publication of special issues devoted to active areas of current research in Chemistry has been a regular feature of this Journal. Fluorescence is now so widely used in chemistry, biology and materials research that the Editorial Committee readily accepted a suggestion to bring out a special issue on 'Fluorescence Spectroscopy and its Applications'.

There are just three properties that we measure in fluorescence: intensity, spectrum and polarization. The information obtained from these about the fluorescent molecules in a sample is straightforward, namely, concentration, identity of the emitting molecule and its spatial orientation. Fluorescence is highly sensitive to the immediate environment of the molecule, which makes it extremely useful in numerous applications in chemistry and biology, especially the latter. The time-dependence of these three fluorescence properties, when excited by an ultra-short light pulse, adds a new dimension to the understanding of the chemical kinetics and molecular dynamics of the excited molecule. This special issue contains eighteen articles dealing with many different aspects of fluorescence spectroscopy and applications in chemistry, which I hope would be useful to both chemists and spectroscopists.

I thank the Indian Academy of Sciences and, in particular, the Editorial Board of the *Journal of Chemical Sciences* for inviting me to be the Guest Editor of this Special Issue. I am also grateful to all the authors and the reviewers for extending their full cooperation.

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Guest Editor