



# Micelles, Microemulsions, *and* Monolayers

*Science and Technology*

*edited by*

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## In Memoriam



Vinod Kumar Pillai  
(1968–1997)

Dr. Vinod Kumar Pillai was born in Tiruvalla, India on January 13, 1968. He attended St. Xavier School in Delhi, India. In 1990 he received his B.S. degree in chemical engineering at the Indian Institute of Technology, Delhi, India. Subsequently, he came to the University of Florida as a graduate student and worked in Professor Dinesh O. Shah's research group from 1990 to 1995. During the course of his Ph.D. thesis research, he worked on nanoparticles of magnetic materials and superconductors, and investigated the role of interfacial rigidity and chain-length compatibility on the reaction kinetics in microemulsions. After receiving his Ph.D. in 1995, Vinod completed one year of postdoctoral work at McMaster University in Canada. He then returned to Professor Shah's laboratory as a postdoctoral associate in 1996.

He was the coordinator of the International Symposium on Micelles, Microemulsions, and Monolayers: Quarter Century Progress and New Horizons hosted by the Center for Surface Science and Engineering at the University of Florida August 28–30, 1995. Unfortunately, he passed away on March 10, 1997. This book is dedicated to the memory and invaluable scientific contributions of Dr. Vinod Pillai, who was a dear colleague, ideal student, enthusiastic postdoctoral associate, and really good friend to everyone who knew him.

# Preface

This book is based on the plenary and invited lectures presented at the International Symposium on Micelles, Microemulsions, and Monolayers: Quarter Century Progress and New Horizons, which was hosted by the Center for Surface Science and Engineering at the University of Florida August 28–30, 1995. The papers presented at this symposium reviewed the progress achieved in the past 25 years (1970–1995) and described the new horizons for future research on micelles, microemulsions, and monolayers, as well as their technological significance.

The chapters cover the new insights into the dynamic properties of interfaces and the kinetics of micellization in relation to foaming, emulsification, wettability, detergency, and solubilization phenomena. Several chapters describe the key advances in the use of microemulsions in technological areas such as preparation of nanoparticles, enzymatic reactions, and pharmaceutical and drug delivery systems, as well as polymerization of microemulsions to produce microlatexes. The symposium also covered the major developments in self-assembled and insoluble monolayers at the gas/liquid and liquid/liquid interfaces as well as Langmuir–Blodgett films.

The Center for Surface Science and Engineering is most grateful to the National Science Foundation, the University of Florida, and the following companies for their generous support of this symposium: ALCOA, Inc.; Alcon Laboratories; ICI Surfactants; Kimberly-Clark Corporation; Kraft General Foods; LG Chem Ltd.; LG Cosmetics & Household Products; Lonza, Inc.; Milliken Research Corporation; Noven Pharmaceuticals; Procter & Gamble Company; and Rhône-Poulenc, Inc.

Each professor is grateful to his mentor and his students for their contributions to his academic endeavors. The influence of my late profes-

sor, Jack H. Schulman, on everything that I have accomplished during the past 25 years cannot be overlooked. My involvement in the research on micelles, microemulsions, and monolayers, and many other areas of surface and colloid science, are directly linked to what I inherited as a student in Professor Schulman's laboratory.

I would like to thank all participants of the symposium, including plenary and invited speakers, as well as session chairs and cochairs for their invaluable contributions. I am also most grateful to my colleagues at the University of Florida and the members of the local arrangement committee for making all the detailed arrangements for this symposium. I am also grateful to our students, postdoctoral associates, research scholars, colleagues, and secretarial staff for enthusiastically completing numerous tasks related to this symposium.

I would like to conclude with a poem written by Nobel Laureate Indian poet Ravindranath Tagore (1861–1941).

When the Sun went down in the evening,  
The Sun asked everyone on earth,  
"Who will take up my responsibility of providing light?"  
No one replied.  
However, a candle in a log cabin said,  
"My Lord, I can not light up the whole universe as you do,  
But I'll do my best to light up this small room."

This poem gives a profound message to everyone, including scientists. As researchers, all that we can do is to contribute to a small area of science or human knowledge. In our case, this is the very small area of surface and colloid science.

During the past quarter century, our group at the University of Florida has conducted extensive studies on micelles, microemulsions, and monolayers, and their technological applications. We hope that the scientific content of this volume is enthusiastically received by present and future researchers in the surface and colloid science community all over the world.

*Dinesh O. Shah*

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