Preface

Yu Liu

School of Civil and Environmental Engineering,
Nanyang Technological University,
50 Nanyang Avenue, 639798, Singapore
E-mail: cyliu@ntu.edu.sg

Etienne Paul

Université de Toulouse; INSA, UPS, INP; LISBP,
135 Avenue de Rangueil, F-31077 Toulouse, France

INRA, UMR792 Ingénierie des Systèmes Biologiques et des Procédés,
F-31400 Toulouse, France

CNRS, UMR5504,
F-31400 Toulouse, France
E-mail: paul@insa-toulouse.fr

Qing-Liang Zhao

School of Municipal and Environmental Engineering,
Harbin Institute of Technology (2nd Campus),
202 Haihe Road, Nangang District,
Harbin 150090, China
E-mail: zhql1962@yahoo.com.cn
E-mail: zhql1962@163.com

Yung-Tse Hung

Department of Civil and Environmental Engineering,
Cleveland State University,
2121 Euclid Avenue,
Cleveland, OH 44115, USA
E-mail: yungtsehung@yahoo.com

Hamidi Abdul Aziz

School of Civil Engineering,
Engineering Campus, Universiti Sains Malaysia,
14300 Nibong Tebal, Penang, Malaysia
E-mail: cehamidi@eng.usm.my

Biographical notes: Yu Liu is an Associate Professor at School of Civil and Environmental Engineering, Nanyang Technological University, Singapore. His research interests are in the areas of biogranulation process, innovative water and wastewater treatment processes, development of novel type of biofilm reactor, population dynamics of suspended and attached cultures, modelling and mechanisms of microbial energy uncoupling, and nutrients removal. He has published over 100 SCI-tracked journal papers and five books.

Etienne Paul is Professor at the National Institute of Applied Sciences in the Department of Chemical and Environmental Engineering, Toulouse, France. His research interests are in the areas of innovative waste and wastewater treatment and valorisation processes, excess sludge reduction, bioplastic production from sludge, biofilm processes and reactors, modelling population dynamics of suspended and attached cultures. He has published over 50 SCI-tracked journal papers and three book chapters in English.

Qing-Liang Zhao is currently a Professor at the School of Municipal and Environmental Engineering, Harbin Institute of Technology, China. He was granted PhD in Harbin University of Civil Engineering and Architecture in 1993. He was one of the Winner of Scientific Fund of Heilongjiang Provincial Outstanding Youth in 2004. His major research interests are in the areas of wastewater treatment and resource utilisation, landfill leachate treatment, sludge minimisation and excess sludge stabilisation, microbial fuel cells, etc. He has published about 40 SCI-tracked journal papers and six books in Chinese as well as one book chapter in English.

Yung-Tse Hung received his PhD Degree in Environmental Engineering from University of Texas at Austin. His BSCE and MSCE degrees are from National Cheng Kung University, Taiwan. He has been a Professor of Civil and Environmental Engineering at Cleveland State University since 1981. He has taught at 16 universities in eight countries. His research interests are biological waste treatment, industrial waste and hazardous waste treatment. He is Editor of *International Journal of Environment and Waste Management* and Editor of *International Journal of Environmental Engineering*, and Editor-in-Chief, *International Journal of Environmental Engineering Science*.

Hamidi Abdul Aziz received his PhD in Civil Engineering (Environmental Engineering) from University of Strathclyde, Scotland in 1992. He is now a Professor at the School of Civil Engineering, Universiti Sains Malaysia. His research is focused on alleviating the problems associated with industrial wastewater discharge and solid waste management via land filling, especially on leachate pollution. He continues to serve as peer reviewer for several international journals. He serves as an Associate Editor of the *International Journal of Chemistry and Environment.* He currently sits as the Editorial Board Member of *International Journal of Environment and Waste Management* and *International Journal of Environmental Engineering.*

Special Issue: Microbial immobilisation technology has been developed and widely employed in wastewater treatment for decades. In general, microbial immobilisation can be classified as biofilm, aerobic and anaerobic granulation.

The publication contains nine papers on biofilms, anaerobic and aerobic granulation covering a wide spectrum of the up-to-date fundamental and applied research on

microbial immobilisation technology. The papers in this special issue look into the effect of operation conditions on the formation, stability and performance of biofilms and microbial granules, microbiology of immobilised cultures, removal of nutrients (N and P) as well as recalcitrant chemicals by microbial immobilisation technology.

We believe that this publication can provide a unique platform for researchers in the field to exchange ideas, and will further stimulate discussion on the development of the next-generation microbial immobilisation technology for high-performance wastewater treatment with low energy demand.