

Green Tribology

Emerging Technologies and Applications

Edited by

T.V.V.L.N. Rao

Salmiah Binti Kasolang

Guoxin Xie

Jitendra Kumar Katiyar

Ahmad Majdi Abdul Rani



CRC Press

Taylor & Francis Group

Boca Raton London New York

CRC Press is an imprint of the
Taylor & Francis Group, an **Informa** business

Contents

Preface.....	vii
Editors.....	ix
Contributors.....	xi
Chapter 1 Recent Developments in Green Tribology	1
<i>T.V.V.L.N. Rao, Salmiah Binti Kasolang, Guoxin Xie, Jitendra Kumar Katiyar, and Ahmad Majdi Abdul Rani</i>	
Chapter 2 Bio-Based Lubricant in the Presence of Additives: Classification to Tribological Behaviour	27
<i>Ali Raza, Arslan Ahmed, M.A. Kalam, and I.M. Rizwanul Fattah</i>	
Chapter 3 Tribological Investigations of Sustainable Bio-Based Lubricants for Industrial Applications	71
<i>Neha Sharma, Sayed Khadija Bari, Ponnkantti Nagendramma, Gananath D. Thakre, and Anjan Ray</i>	
Chapter 4 Nano-Technology-Driven Interventions in Bio-Lubricant's Tribology for Sustainability	99
<i>Rajeev Nayan Gupta, A.P. Harsha, and Tej Pratap</i>	
Chapter 5 Tribology of Polymer Composites with Green Nano-Materials	129
<i>Guoxin Xie, X. H. Sun, H.J. Gong, Y.L. Ren, H. Chen, M.Y. Li, Y.B. Li, L. Zhang, Z.J. Ji, and L.N. Si</i>	
Chapter 6 Working of Functional Components in Self-Healing Coatings for Anti-Corrosion Green Tribological Applications: An Overview.....	155
<i>Tauseef Ahmed, H.H. Ya, Mohammad Azeem, Mohammad Azad Alam, Hafiz Usman Khalid, Abdul Munir Hidayat Syah Lubis, Mohammad Rehan Khan, Mian Imran, and Adnan Ahmed</i>	
Chapter 7 Nano-Indentation and Indentation Size Effect on Different Phases in Lamellar Structure High Entropy Alloy	173
<i>Norhuda Hidayah Nordin, Mohd Hafis Sulaiman, and Leong Zhaoyuan</i>	

Chapter 8	Improving Tribological Performance of Meso Scale Air Journal Bearing Using Surface Texturing: An Approach of Green Tribology	183
	<i>Nilesh D. Hingawe and Skylab P. Bhole</i>	
Chapter 9	Textured Tool Surfaces for Improved Lubrication and Friction in Sheet Metal Forming	201
	<i>Mohd Hafis Sulaiman, Norhuda Hidayah Nordin, N.A. Sukindar, and M.J.M. Ridzuan</i>	
Chapter 10	Green Machining Techniques: A Review	223
	<i>Sangeeta Das and Shubhajit Das</i>	
Chapter 11	Future Outlooks in Green Tribology	241
	<i>T.V.V.L.N. Rao, Salmiah Binti Kasolang, Guoxin Xie, Jitendra Kumar Katiyar, and Ahmad Majdi Abdul Rani</i>	
Index	247