



Automotive tribology

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Springer,
2019

Electronic books

Conference papers and proceedings

Monografía

This book presents a comprehensive study of all important aspects of tribology. It covers issues and their remedies adopted by researchers working on automobile systems. The book is broadly divided in to three sections, viz. (i) new materials for automotive applications, (ii) new lubricants for automotive applications, and (iii) impact of surface morphologies for automotive applications. The rationale for this division is to provide a comprehensive and categorical review of the developments in automotive tribology. The book covers tribological aspects of engines, and also discusses influence of new materials, such as natural fibers, metal foam materials, natural fiber reinforced polymer composites, carbon fiber/silicon nitride polymer composites and aluminium matrix composites. The book also looks at grease lubrication, effectiveness and sustainability of solid/liquid additives in lubrication, and usage of biolubricants. In the last section the book focuses on brake pad materials, shot peening method, surface texturing, magnetic rheological fluid for smart automobile brake and clutch systems, and application of tribology in automobile systems. This book will be of interest to students, researchers, and professionals from the automotive industry

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Título: Automotive tribology Jitendra Kumar Katiyar, Shantanu Bhattacharya, Vinary Kumar Patel, Vikram Kumar, editors

Editorial: Singapore Springer 2019

Descripción física: 1 online resource (342 pages)

Mención de serie: Energy, Environment, and Sustainability Ser

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ISBN: 9789811504341 electronic bk.) 9811504342 electronic bk.) 9789811504334 9811504334 9789811504334 9789811504358 print) 9811504350 9789811504365 print) 9811504369

Materia: Tribology- Congresses Automobiles- Dynamics- Congresses Automobiles- Dynamics Tribology

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Congresos: International Conference on "Sustainable Energy and Environmental Challenges" 2018 :. Roorkee, India)

Enlace a formato físico adicional: Print version Katiyar, Jitendra Kumar. Automotive Tribology. Singapore : Springer, 2019 9789811504334

Punto acceso adicional serie-Título: Energy, environment, and sustainability

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