



Automotive tribology

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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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