1. Record Nr. UNINA9910790002403321

Titolo	Advanced materials in automotive engineering [[electronic resource] /] / edited by Jason Rowe
Pubbl/distr/stampa	Philadelphia, Pa., : Woodhead Pub., 2012
ISBN	0-85709-546-3
Descrizione fisica	1 online resource (353 p.)
Collana	Woodhead Publishing in materials Advanced materials in automotive engineering
Altri autori (Persone)	RoweJason
Disciplina	629.23
Soggetti	Automobiles - Design and construction Automobiles - Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Advanced materials in automotive engineering; Copyright; Contents; Contributor contact details; 1 Introduction: advanced materials and vehicle lightweighting; 1.1 References; 2 Advanced materials for automotive applications: an overview; 2.1 Introduction; 2.2 Steels; 2.3 Light alloys; 2.4 Stainless steels; 2.5 Castiron; 2.6 Composite materials; 2.7 Glazing materials; 2.8 Conclusions; 2.9 References; 3 Advanced metal-forming technologies for automotive applications; 3.1 Formability; 3.2 Forming technology; 3.3 Modelling; 3.4 Economic considerations; 3.5 Bibliography 4 Nanostructured steel for automotive body structures 4.1 Introduction; 4.2 Potential demand for nanostructured steels for automotive body structures; 4.3 Fabricating nanostructured low-C steel sheets; 4.4 Improving elongation in nanostructured steel sheets; 4.5 Crash-worthiness of nanostructured steel sheets; 4.6 Conclusions; 4.7 References; 4.8 Appendix; 5 Aluminium sheet for automotive applications; 5.1 Introduction; 5.2 Sheet alloys for outer applications; 5.3 Sheet alloys for inner closure panels and structural applications; 5.4 Fusion alloys; 5.5 Surface treatment of the aluminium strip 5.6 Future trends 5.7 References; 6 High-pressure die-cast (HPDC) aluminium alloys for automotive applications; 6.1 Introduction; 6.2 AlSi heat-treatable alloys - Silafont-36; 6.3 AlMg non heat-treatable alloys - Magsimal-59; 6.4 AlSi non heat-treatable alloys - Castasil-37; 6.5

Automotive trends in die-casting; 6.6 References; 7 Magnesium alloys for lightweight power trains and automotive bodies; 7.1 Introduction; 7.2 Cast magnesium; 7.3 Sheet magnesium; 7.4 Extruded magnesium; 7.5 Future trends; 7.6 Acknowledgments; 7.7 References
8 Polymer and composite moulding technologies for automotive applications 8.1 Introduction; 8.2 Polymeric materials used in the automotive industry; 8.3 Composite processing procedures; 8.4 Fields of application for fibre-reinforced polymer composites (FRPCs); 8.5 Further challenges for composites in the automotive industry; 8.6 References; 9 Advanced automotive body structures and closures; 9.1 Current technology, applications and vehicles; 9.2 Key factors driving change and improvements; 9.3 Trends in material usage; 9.4 Latest technologies; 9.5 References
10 Advanced materials and technologies for reducing noise, vibration and harshness (NVH) in automobiles 10.1 Introduction; 10.2 General noise, vibration and harshness (NVH) abatement measures; 10.3 Selected concepts for noise, vibration and harshness (NVH) control; 10.4 Applications; 10.5 Conclusions; 10.6 Acknowledgements; 10.7 References; 11 Recycling of materials in automotive engineering; 11.1 End of life vehicles (ELVs); 11.2 Reuse, recycle or recover?; 11.3 Environmental impact assessment tools; 11.4 Case study - the World First racing car; 11.5 Conclusions; 11.6 References
12 Joining technologies for automotive components

Sommario/riassunto

The automotive industry is under constant pressure to design vehicles capable of meeting increasingly demanding challenges such as improved fuel economy, enhanced safety and effective emission control. Drawing on the knowledge of leading experts, Advanced materials in automotive engineering explores the development, potential and impact of using such materials.Beginning with a comprehensive introduction to advanced materials for vehicle lightweighting and automotive applications, Advanced materials in automotive engineering goes on to consider nanostructured steel for automotive body

2. Record Nr. UNINA9910350221503321

Autore	Wu Jie-qiang
Titolo	AdS3/CFT2 and Holographic Entanglement Entropy / / by Jie-qiang Wu
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-13-3212-6
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (x, 145 pages) : illustrations
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	539.725
Soggetti	Quantum field theory String models Quantum computers Spintronics Quantum Field Theories, String Theory Quantum Information Technology, Spintronics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Doctoral thesis accepted by Peking University, Beijing, China."
Nota di contenuto	Background -- Holographic Entanglement Entropy in a Finite System at Finite Temperature -- One Loop Partition Function -- Holographic Entanglement Entropy in a General System -- Conformal Block and the Holographic Description -- Conclusion and Outlook.
Sommario/riassunto	This book focuses on AdS3/CFT2, addressing different aspects of this correspondence in field theory and in gravity, including entanglement entropy, higher genus partition function, and conformal block. Holographic entanglement entropy is an important area in holographic and quantum information, which implies a deep relation between geometry and quantum entanglement. In this book, the authors use holographic entanglement entropy as a tool to investigate AdS3/CFT2. They study the entanglement entropy at high temperature in field theory and in holographics, and show that the results match each other in classical and one-loop order. In the AdS3/CFT2 system, they examine in detail the correspondence, exploring the higher genus partition function, entanglement entropy in a general system and conformal block, and they find good correspondence in field theory and gravity. The result strongly supports AdS3/CFT2 correspondence. In

addition, they develop several important techniques in 2d CFT and 3d gravity, which also offer inspiration for other fields.