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| Autore                  | Goh Kheng Lim   |
| Titolo                  | Discontinuous-Fibre Reinforced Composites : Fundamentals of Stress Transfer and Fracture Mechanics / / by Kheng Lim Goh   |
| Pubbl/distr/stampa      | London : , : Springer London : , : Imprint : Springer, , 2017   |
| ISBN                    | 9781447173052   |
| Edizione                | [1st ed. 2017.]   |
| Descrizione fisica      | 1 online resource (XXIV, 190 p. 88 illus.)  |
| Collana                 | Engineering Materials and Processes, , 1619-0181  |
| Disciplina              | 620.118   |
| Soggetti                | Ceramics<br>Glass<br>Composites (Materials)<br>Composite materials<br>Mechanics<br>Mechanics, Applied<br>Structural materials<br>Computer simulation<br>Ceramics, Glass, Composites, Natural Materials<br>Solid Mechanics<br>Structural Materials<br>Simulation and Modeling  |
| Lingua di pubblicazione | Inglese   |
| Formato                 | Materiale a stampa  |
| Livello bibliografico   | Monografia  |
| Nota di bibliografia    | Includes bibliographical references at the end of each chapters.  |
| Nota di contenuto       | Reinforcing by fibres -- Physical properties of fibres and matrix -- Mechanics of elastic stress transfer -- Fibre debonding, matrix yielding and cracks -- Mechanics of plastic stress transfer -- Composite fracture -- Composite design -- Appendix A Convergence to continuous-fibre composites -- Appendix B Mechanical properties of materials.           |
| Sommario/riassunto      | This book provides a simple and unified approach to the mechanics of discontinuous-fibre reinforced composites, and introduces readers as generally as possible to the key concepts regarding the mechanics of elastic stress transfer, intermediate modes of stress transfer, plastic stress transfer, fibre pull-out, fibre fragmentation and matrix rupture. |

These concepts are subsequently applied to progressive stages of the loading process, through to the composite fractures. The book offers a valuable guide for advanced undergraduate and graduate students attending lecture courses on fibre composites. It is also intended for beginning researchers who wish to develop deeper insights into how discontinuous fibre provides reinforcement to composites, and for engineers, particularly those who wish to apply the concepts presented here to design and develop discontinuous-fibre reinforced composites.

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