

Foundations of Materials Science and Engineering, 6e

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Detailed List of New Features

Connect and SmartBook are available for the first time with this edition.

The mechanical property discussion in Chapter 6 has been expanded to include modulus of resilience and toughness.

The concept of glass transition temperature has been expanded upon in the discussion of polymers in Chapter 10.

The classification of composite materials in Chapter 12 has been expanded and improved.

In Chapter 13, the sign convention in reporting the half-cell potentials has been made consistent with IUPAC conventions.

Over 1200 end-of-chapter problems. For most chapters, new problems—mostly in the synthesis and evaluation category—have been developed. Every chapter has approximately 150 problems. Therefore, a mix of related key-topic questions are in Connect.

Retained Features

A concise, readable style is used throughout; readers are given understandable explanations without the excessive detail other textbooks routinely include.

Over 1200 end-of-chapter problems and over 180 Materials Selection and Design problems.

Materials Selection and Design Problems in each chapter relate concepts more clearly to engineering practice, and help satisfy ABET requirements for design content in all engineering courses.

Virtual labs, which provide interactive quizzes, animations, and video on essential material science processes are included on the book website along with lecture PPT files, sample syllabi, animations and tutorials.

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