

We express our appreciation to those who have made contributions to this edition. We are especially indebted to Michael Salkind of Kent State University, who provided assistance in updating and upgrading important material in several chapters. In addition, we appreciate Grant E. Head's expert programming skills, which he used in developing the *Virtual Materials Science and Engineering* software. In addition, we thank instructors who helped review the manuscript and reviewed and wrote content for *WileyPLUS*. We thank others who have made valuable contributions:

Arvind Agarwal, *Florida International University*  
 Sayavur I. Bakhtiyarov, *New Mexico Institute of Mining and Technology*  
 Prabhakar Bandaru, *University of California-San Diego*  
 Valery Bliznyuk, *Western Michigan University*  
 Suzette R. Burckhard, *South Dakota State University*  
 Stephen J. Burns, *University of Rochester*  
 Audrey Butler, *University of Iowa*  
 Matthew Cavalli, *University of North Dakota*  
 Alexis G. Clare, *Alfred University*  
 Stacy Gleixner, *San José State University*  
 Ginette Guinois, *Dubois Agrinovation*  
 Richard A. Jensen, *Hofstra University*  
 Bob Jones, *University of Texas, Pan American*  
 Molly Kennedy, *Clemson University*  
 Kathleen Kitto, *Western Washington University*  
 Chuck Kozlowski, *University of Iowa*  
 Masoud Naghedolfeizi, *Fort Valley State University*  
 Todd Palmer, *Penn State University*  
 Oscar J. Parales-Perez, *University of Puerto Rico at Mayaguez*  
 Bob Philipps, *Fujifilm USA*  
 Don Rasmussen, *Clarkson University*  
 Sandie Rawnsley, *Murdoch University*  
 Wynn A. Ray, *San José State University*  
 Hans J. Richter, *Seagate Recording Media*  
 Joe Smith, *Black Diamond Equipment*  
 Jeffrey J. Swab, *U.S. Military Academy*  
 Cindy Waters, *North Carolina Agricultural and Technical State University*  
 Yaroslava G. Yingling, *North Carolina State University*

We are also indebted to Jennifer Welter, Sponsoring Editor, for her assistance and guidance on this revision.

Last, but certainly not least, we deeply and sincerely appreciate the continual encouragement and support of our families and friends.

WILLIAM D. CALLISTER, JR.

DAVID G. RETHWISCH

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# List of Symbols

The number of the section in which a symbol is introduced or explained is given in parentheses.

$A$ = area	$\mathcal{E}$ = electric field intensity (12.3)
$\text{\AA}$ = angstrom unit	$E_f$ = Fermi energy (12.5)
$A_i$ = atomic weight of element $i$ (2.2)	$E_g$ = band gap energy (12.6)
APF = atomic packing factor (3.4)	$E_r(t)$ = relaxation modulus (7.15)
$a$ = lattice parameter: unit cell $x$ -axial length (3.4)	%EL = ductility, in percent elongation (7.6)
$a$ = crack length of a surface crack (9.5)	$e$ = electric charge per electron (12.7)
at% = atom percent (5.6)	$e^-$ = electron (16.2)
$B$ = magnetic flux density (induction) (18.2)	erf = Gaussian error function (6.4)
$B_r$ = magnetic remanence (18.7)	exp = $e$ , the base for natural logarithms
BCC = body-centered cubic crystal structure (3.4)	$F$ = force, interatomic or mechanical (2.5, 7.2)
$b$ = lattice parameter: unit cell $y$ -axial length (3.11)	$\mathcal{F}$ = Faraday constant (16.2)
$\mathbf{b}$ = Burgers vector (5.7)	FCC = face-centered cubic crystal structure (3.4)
$C$ = capacitance (12.18)	$G$ = shear modulus (7.3)
$C_i$ = concentration (composition) of component $i$ in wt% (5.6)	$H$ = magnetic field strength (18.2)
$C'_i$ = concentration (composition) of component $i$ in at% (5.6)	$H_c$ = magnetic coercivity (18.7)
$C_v, C_p$ = heat capacity at constant volume, pressure (17.2)	HB = Brinell hardness (7.16)
CPR = corrosion penetration rate (16.3)	HCP = hexagonal close-packed crystal structure (3.4)
CVN = Charpy V-notch (9.8)	HK = Knoop hardness (7.16)
%CW = percent cold work (8.11)	HRB, HRF = Rockwell hardness: B and F scales (7.16)
$c$ = lattice parameter: unit cell $z$ -axial length (3.11)	HR15N, HR45W = superficial Rockwell hardness: 15N and 45W scales (7.16)
$c_v, c_p$ = specific heat at constant volume, pressure (17.2)	HV = Vickers hardness (7.16)
$D$ = diffusion coefficient (6.3)	$h$ = Planck's constant (19.2)
$D$ = dielectric displacement (12.19)	( $hkl$ ) = Miller indices for a crystallographic plane (3.14)
DP = degree of polymerization (4.5)	$I$ = electric current (12.2)
$d$ = diameter	$I$ = intensity of electromagnetic radiation (19.3)
$d$ = average grain diameter (8.9)	$i$ = current density (16.3)
$d_{hkl}$ = interplanar spacing for planes of Miller indices $h, k$ , and $l$ (3.20)	$i_c$ = corrosion current density (16.4)
$E$ = energy (2.5)	
$E$ = modulus of elasticity or Young's modulus (7.3)	