

Index

a

- Amplification, wave 143, 159
- Anisotropy, crystal 1, 27, 30, 103
- Axis, crystal 34, 40, 52, 106
 - optical 3, 125
 - principal 8, 143
 - of rotation 3
 - of symmetry 3, 15

b

- Branch, longitudinal 26, 91
 - low-frequency 22, 132
 - high-frequency 22, 134
 - phonon 25, 80
 - phonon-plasmon 31, 51
 - phonon-polariton 23, 52, 56

c

- Carrier, charge 3, 6, 12, 33
 - hot 143, 161
 - two-dimensional 125, 167
- Crystal, anisotropic 3, 4
 - ionic 3, 24
 - nonconducting 21
 - nonpolar 3, 36
 - polar 3, 21
 - uniaxial 3
- Coupling, of plasmons and optical phonons 25
 - of electromagnetic and phonon-plasmon vibrations 27
- Curve, dispersion 15, 24, 29

d

- Density, electric current 6, 143, 167
 - electric flux 7, 17, 25
 - of free charge carriers 7, 120
 - of polarization 17
 - magnetic flux 7, 125

- Direction, of propagation 10
- Dispersion, frequency 7, 21
 - spatial 3

e

- Excitation, wave 143, 155
- Effect, quantum Hall 125-137
 - retardation 13, 21
 - Voigt 47
- Ellipse, polarization 33, 39
- Equation, dispersion 9, 21, 38, 77
 - kinetic 6, 33
 - quasi-electrostatic 18

f

- Field, electric 21, 143-170
 - magnetic 33-56, 184, 190
 - far 194
- Frequency, cut-off 10, 11, 22, 30
 - cyclotron 33, 125, 127
 - plasma 16
 - resonance 11, 22, 30
- Fourier, components 6, 7
 - integral 187, 190, 199
 - transformation 6, 186
- Function, diadic Green 187

i

- Index, refractive 9, 11, 28
- Instability, electromagnetic 139
 - nonradiative 165
 - radiative 163
- Insulator, antiferromagnetic 103
- Maxwell's equations 5, 24, 103, 143
- Medium, anisotropic 3, 181
 - gyromagnetic 183
 - lossless 16
 - nonconducting 13
- Mode, longitudinal-transverse 18, 19, 30

o

- Oscillation, amplitude 79
 - ellipticity 42
 - rotation angle 42

p

- Permeability 6, 186
- Permittivity 6, 24
- Plasma, cold 3
 - electronic 1, 3, 9, 33
- Phonon, optical 16, 21
- Polariton, bulk 21
 - interface 103-113
 - magnon-plasmon 106
 - phonon 21, 120
 - phonon-plasmon 28, 30, 31
 - surface 87-95
- Propagation, wave 9, 32
 - oblique 11, 27

r

- Radiation, of a dipole source 183
- Reflection, wave 59-69
 - total internal 110
- Relation, dispersion 9, 11, 12, 21, 77
- Resonance, plasma 33, 172
 - cyclotron 33, 66

s

- Semiconductor, uniaxial 3, 21
 - nonpolar 5, 13
 - polar 4, 16, 21

- Surface, isoenergetic 5
 - substrate 186

t

- Tensor, conductivity 5, 143
 - dielectric permittivity 3, 7, 8, 24, 25, 33
 - differential conductivity 143, 151
 - reciprocal effective mass 34
- Transmission, total 120

v

- Vector, wave 9, 25, 27
 - electric field intensity 5, 7
 - magnetic field intensity 5, 9
- Velocity, phase 12, 87
 - group 12, 106
- Vibration, electrostatic 13
 - lattice 27, 29
 - optical lattice 5, 16, 21
 - phonon-plasmon 24, 25
 - longitudinal plasma 5, 13

w

- Wave, coupled 23, 89
 - extraordinary 10, 22, 28
 - electromagnetic 3, 33
 - guided 87, 172
 - longitudinal 11, 18
 - ordinary 10, 22, 28
 - partial 128
 - potential 14, 25
 - radio 33, 155
 - transverse 10, 22