

CONTENTS

<i>Contributors</i>	<i>vii</i>
<i>Preface</i>	<i>ix</i>
<i>Future Contributors</i>	<i>xi</i>
1. Interference of Light and of Material Particles: A Departure from the Superposition Principle	1
R. Castañeda, G. Matteucci, and R. Capelli	
1. Introduction	1
2. Theoretical Model	4
3. Particle Interference Described with the Novel Model	10
4. Interpretation of Electron Interference	17
5. Interpretation of Massive Molecule Interference	23
6. Perspectives in the Realization of Molecular Nanostructures	31
7. Conclusions	34
Appendix 1 The Size of the Structured Supports of Spatial Coherence	35
Appendix 2 Nonparaxial Far-Field Interference of Light	37
Acknowledgments	41
References	41
2. Unified Numerical Formalism of Modal Methods in Computational Electromagnetics and the Latest Advances: Applications in Plasmonics	45
K. Edee, J.-P. Plumey, and B. Guizal	
1. Introduction	46
2. From Maxwell Equations to Modal Equations	48
3. Method of Moment and Operator Representation	56
4. FMM in the Cartesian Coordinate System	59
5. From Subsectional to Global Basis Functions	60
6. Anisotropic Impedance Matched Media and Their Equivalence With Complex Coordinates	78
7. Application: Modal Analysis of the Coupling Between a Square Ring Resonator and a Metal–Insulator–Metal Waveguide	80
8. About Monomode Behavior of a More Realistic 3D Plasmonic Open Waveguide	96
References	102

3. Fundamentals of Focal Series Inline Electron Holography	105
A. Lubk, K. Vogel, D. Wolf, J. Krehl, F. Röder, L. Clark, G. Guzzinati, and J. Verbeeck	
1. Introduction	105
2. Thin Lens Imaging	110
3. Experimental Implementation	115
4. Long-Range Focal Series Reconstruction	123
5. Case Study	133
6. Summary and Outlook	138
Appendix	139
Acknowledgments	143
References	143
 <i>Index</i>	 149
<i>Contents of Volumes 151–196</i>	153