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	Titolo	Manipulation of Near Field Propagation and Far Field Radiation of Surface Plasmon Polariton / / by Lin Li
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	Descrizione fisica	1 online resource (X, 116 p. 80 illus., 74 illus. in color.)
	Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
	Disciplina	530.44
	Soggetti	Optics Electrodynamics Microwaves Optical engineering Optical materials Electronics - Materials Lasers Photonics Classical Electrodynamics Microwaves, RF and Optical Engineering Optical and Electronic Materials Optics, Lasers, Photonics, Optical Devices
	Lingua di pubblicazione	Inglese
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	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references at the end of each chapters.
	Nota di contenuto	Introduction -- Basic experimental research on surface plasmon polariton -- The principle of non-perfectly-matched Bragg diffraction and the realization of plasmonic Airy beam -- Steering surface plasmon polariton on metal surface with non-perfectly-matched Bragg diffraction -- Modulation far-field radiation with plasmonic structure -- Summary.
	Sommario/riassunto	This book mainly focuses on the study of steering electromagnetic fields in near-field and far-field contexts involving plasmonic structures. It also offers a new approach to achieving full control of optical polarizations and potentially boosting the development in

photonic information processing. A new in-plane phase modulation method is proposed and described, by means of which a series of optical beams were realized with nanostructures in metal surfaces, such as a plasmonic Airy beam, broad band focusing beam, and demultiplexing, collimated beam, as well as an optical orbital angular momentum (OAM) beam. Further, the book presents a plasmonic polarization generator, which can reconfigure an input polarization to all kinds of states simultaneously.