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Sommario/riassunto	This book discusses design, modeling, and the characterization of slow-light photonic crystal waveguides. Guidelines are developed to obtain slow-light waveguides with broadband characteristics and with low disorder-induced losses. Three functional devices are proposed and studied: A tunable dispersion compensator, a tunable optical delay line, and a high-speed electro-optic modulator. Optical and microwave measurements confirm the designs.