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Sommario/riassunto	Silicon-organic hybrid (SOH) modulators add a highly efficient nonlinear organic electro-optic cladding material to the silicon photonic platform, thereby enabling efficient electro-optic modulation. In this book, the application potential of SOH modulators is investigated. Proof-of-principle experiments show that they can be used for high-speed communications at symbol rates up to 100 GBd and operated directly from a field-programmable gate array (FPGA) without additional driver amplifiers.