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Nota di contenuto	Introduction -- Metallic foams: Fabrication, Properties and Applications -- Carbon substrates: Fabrication, Properties and Applications -- Metal foils: Fabrication, Properties and Applications -- Glass substrates: Fabrication, Properties and Applications -- Ceramic substrates: Fabrication, Properties and Applications -- Textile-based self-supported materials: Fabrication, Properties and Applications -- Flexible substrates: Fabrication, Properties and Applications -- Self-standing nanoarchitectures -- Self-cleaning adsorbents: Fabrication, Properties and Applications -- Self-adhesive electrodes: Fabrication, Properties and Applications -- Free-standing films: Fabrication, Properties and Applications -- Self-standing membrane and its applications -- Surface-enhanced Raman scattering substrates: Fabrication, Properties and Applications -- Self-healing substrates: Fabrication, Properties and Applications -- Application of self-supported materials in solar-cells -- Application of self-supported electrocatalysts -- Application of self-supported electrodes in

supercapacitors -- Self-supported materials for LEDs and photodetectors applications -- Self-supported materials for transistors -- Self-supported materials for non-volatile memory and spintronics -- Application of self-supported materials for photo and photoelectrocatalysis -- Self-supported materials for nanodevices -- Self-supported materials for milli-meter wave and wireless applications -- Self-supported materials for battery technology -- Self-supported materials for electrochromics -- Self-supported materials for fuel cells -- Self-supported materials for water treatment -- Self-supported materials for sensors -- Self-supported materials for wearable device applications -- State-of-the-Art advances and perspectives.

Sommario/riassunto

This book systematically describes free-standing films and self-supporting nanoarrays growing on rigid and flexible substrates, and discusses the numerous applications in electronics, energy generation and storage in detail. The chapters present the various fabrication techniques used for growing self-supporting materials on flexible and rigid substrates, and free-standing films composed of semiconductors, inorganic, polymer and carbon hybrid materials.
