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Autore	Lamprou Dimitrios
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Nota di contenuto	3D and 4D printing in digital healthcare -- 3D Printing for Novel Dosage Form Design -- 3D Printing and regulatory considerations -- Printability of Pharmaceutical Polymers: Issues & Solutions -- Quality by Design (QbD) approach for individualized products based on additive manufacturing,- Material Properties and Selections for Additive Manufacturing (AM) -- Preformulation of 3D printable pharmaceutical dosage forms -- Vat photopolymerization Methods for Drug Delivery Applications -- Extrusion-based 3D printing methods for oral solid dosage forms -- Binder Jetting 3D Printing in Pharmaceutical Manufacturing -- Powder bed fusion 3D printing in drug delivery -- Bioprinting in Personalised Medications -- Shape memory materials and 4D printing in pharmaceutics -- Characterisation methods of final printed products.
Sommario/riassunto	New materials and manufacturing techniques are emerging with potential to address the challenges associated with the manufacture of pharmaceutical systems that will teach new tricks to old drugs. 3D printing (3DP) is a technique that can used for the manufacturing of

dosage forms, and especially targeting paediatric and geriatric formulations, as permits the fabrication of high degrees of complexity with great reproducibility, in a fast and cost-effective fashion, and offers a new paradigm for the direct manufacture of personalised dosage forms. The book is covering the basics behind each additive manufacturing (AM) method, current applications in pharmaceutics for each 3DP method, and case studies (examples) from a teaching perspective, targeting undergraduate (UG) and postgraduate (PG) students. A unique to this book is the integration of studies based upon the use of different AM technologies, which designed to reinforce importance printing parameters and material considerations. The book includes case studies or multiple-choice questions (MCQs), which allow application of the content in a flipped-classroom.