1. Record Nr. UNINA9910700290903321

Autore	Dudley Robert W
Titolo	Simulation of streamflow in the Pleasant, Narraguagus, Sheepscot, and Royal rivers, Maine, using watershed models / / by Robert W. Dudley and Martha G. Nielsen
Pubbl/distr/stampa	Reston, VA : , : U.S. Dept. of the Interior, U.S. Geological Survey, , 2011
Descrizione fisica	1 online resource (v, 31 pages)
Collana	Scientific investigations report ; ; 2010-5221
Altri autori (Persone)	NielsenMartha G
Soggetti	Streamflow - Maine - Computer simulation Stream measurements - Maine - Computer simulation Stream measurements - Computer simulation Streamflow - Computer simulation Maine
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from title screen (viewed Apr. 7, 2011).
Nota di bibliografia	Includes bibliographical references (pages 28-31).

2. Record Nr. UNINA9910484863603321

Titolo	Digital Twins : Applications to the Design and Optimization of Bioprocesses / / edited by Christoph Herwig, Ralf Pörtner, Johannes Möller
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-71656-2
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (260 pages)
Collana	Advances in Biochemical Engineering/Biotechnology, , 1616-8542 ; ; 177
Disciplina	660.63 338.476606
Soggetti	Biotechnology Computational intelligence Manufactures Chemical Bioengineering Computational Intelligence Machines, Tools, Processes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Potential of model-based design of experiments approaches for bioprocess scale-down -- Digital Twins and Their Role in Model-Assisted Design of Experiments -- Digital twins for bioprocess control strategy development and realization -- The Kalman filter for the supervision of cultivation processes.-The challenge of implementing digital twins in operating value chains -- Digital twins in the (bio) pharma industry -- Numerical methods for the design and description of in vitro expansion processes of human mesenchymal stem cells -- Euler-Lagrangian Simulations: A Proper Tool for Predicting Cellular Performance in Industrial Scale Bioreactors.
Sommario/riassunto	This is the second of two volumes that together provide an overview of the latest advances in the generation and application of digital twins in bioprocess design and optimization. Both processes have undergone significant changes over the past few decades, moving from data-

driven approaches into the 21st-century digitalization of the bioprocess industry. Moreover, the high demand for biotechnological products calls for efficient methods during research and development, as well as during tech transfer and routine manufacturing. In this regard, one promising tool is the use of digital twins, which offer a virtual representation of the bioprocess. They reflect the mechanistics of the biological system and the interactions between process parameters, key performance indicators and product quality attributes in the form of a mathematical process model. Furthermore, digital twins allow us to use computer-aided methods to gain an improved process understanding, to test and plan novel bioprocesses, and to efficiently monitor them. This book focuses on the application of digital twins in various contexts, e.g. computer-aided experimental design, seed train prediction, and lifeline analysis. Covering fundamentals as well as applications, the two volumes offers the ideal introduction to the topic for researchers in academy and industry alike.