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Autore	Zschech Ehrenfried
Titolo	Characterization of Nanomaterials: Selected Papers from 6th Dresden Nanoanalysis Symposiumc
Pubbl/distr/stampa	Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2021
Descrizione fisica	1 online resource (139 p.)
Soggetti	Technology: general issues
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	This Special Issue "Characterization of Nanomaterials" collects nine selected papers presented at the 6th Dresden Nanoanalysis Symposium, held at Fraunhofer Institute for Ceramic Technologies and Systems in Dresden, Germany, on 31 August 2018. Following the specific motto of this annual symposium "Materials challenges-Micro- and nanoscale characterization", it covered various topics of nanoscale materials characterization along the whole value and innovation chain, from fundamental research up to industrial applications. The scope of this Special Issue is to provide an overview of the current status, recent developments and research activities in the field of nanoscale materials characterization, with a particular emphasis on future scenarios. Primarily, analytical techniques for the characterization of thin films and nanostructures are discussed, including modeling and simulation. We anticipate that this Special Issue will be accessible to a wide audience, as it explores not only methodical aspects of nanoscale materials characterization, but also materials synthesis, fabrication of devices and applications.

2. Record Nr. UNINA9910566459803321

Autore	Ozarslan Mehmet Ali
Titolo	Fractional Calculus and Special Functions with Applications
Pubbl/distr/stampa	Basel, : MDPI - Multidisciplinary Digital Publishing Institute, 2022
Descrizione fisica	1 online resource (164 p.)
Soggetti	Mathematics & science Research & information: general
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	The study of fractional integrals and fractional derivatives has a long history, and they have many real-world applications because of their properties of interpolation between integer-order operators. This field includes classical fractional operators such as Riemann-Liouville, Weyl, Caputo, and Grunwald-Letnikov; nevertheless, especially in the last two decades, many new operators have also appeared that often define using integrals with special functions in the kernel, such as Atangana-Baleanu, Prabhakar, Marichev-Saigo-Maeda, and the tempered fractional equation, as well as their extended or multivariable forms. These have been intensively studied because they can also be useful in modelling and analysing real-world processes, due to their different properties and behaviours from those of the classical cases.Special functions, such as Mittag-Leffler functions, hypergeometric functions, Fox's H-functions, Wright functions, and Bessel and hyper-Bessel functions, also have important connections with fractional calculus. Some of them, such as the Mittag-Leffler function and its generalisations, appear naturally as solutions of fractional differential equations. Furthermore, many interesting relationships between different special functions are found by using the operators of fractional calculus. Certain special functions have also been applied to analyse the qualitative properties of fractional differential equations, e. g., the concept of Mittag-Leffler stability.The aim of this reprint is to

explore and highlight the diverse connections between fractional calculus and special functions, and their associated applications.