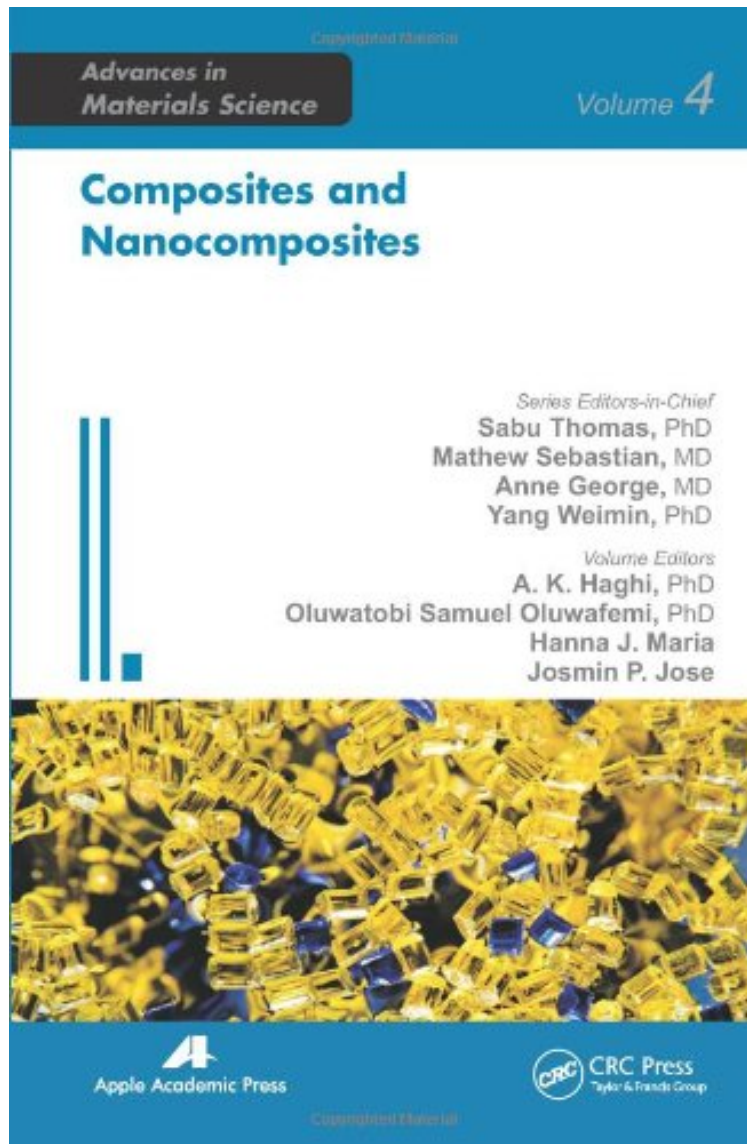


(Free pdf) Composites and Nanocomposites (Advances in Materials Science)

Composites and Nanocomposites (Advances in Materials Science)

From Apple Academic Press
ebooks | Download PDF | *ePub | DOC | audiobook



DOWNLOAD



READ ONLINE

#11760645 in Books 2013-03-01 Original language: English PDF # 1 9.10 x .70 x 6.10l, 1.00 #File Name: 1926895282230 pages | File size: 32.Mb

From Apple Academic Press : Composites and Nanocomposites (Advances in Materials Science) before purchasing it in order to gauge whether or not it would be worth my time, and all praised Composites and Nanocomposites (Advances in Materials Science):

This new book provides a solid understanding of the recent developments in the field of composites and

nanocomposites. It explains the significance of the new fillers, such as graphene and carbon nanotubes in different matrix systems. The application of these materials in biological and other fields also makes this book unique. This detailed study of nanocomposites, their structure, processing and characterization will be of value in all walks of engineering life. The book covers the following topics: polymer matrix composites ceramic matrix composites carbon matrix composites wood-based composites biocomposites eco-composites nanocomposites processing properties fracture and damage mechanics durability and more Composite materials are solids that contain two or more distinct constituent materials or phases, on a scale larger than the atomic. The term composite is usually reserved for those materials in which the distinct phases are separated on a scale larger than the atomic, and in which properties such as the elastic modulus are significantly altered in comparison with those of a homogeneous material. Composites have properties that cannot be achieved by either of the constituent materials alone. Composites are becoming more and more important as they can help improve our quality of life. Composites are put into service in flight vehicles, automobiles, boats, pipelines, buildings, roads, bridges, and dozens of other products. Researchers are finding ways to improve other qualities of composites so they may be strong, lightweight, long-lived, and inexpensive to produce. The science and engineering of composites and nanocomposites draws on traditional characterization and processing technologies. Research describing structures containing nanoparticles seems to rely on methods that are being pushed to the limit of resolution. Preparation of nanocomposites also poses very real processing challenges. The list of questions about the fabrication, characterization, and use of nanocomposites is long despite massive financial and intellectual investment. The magnitude of the effects these small particles impart to the bulk properties of a composite are great enough that the science is likely to continue to grow in importance.

About the Author Dr. Sabu Thomas is the Director of the School of Chemical Sciences, Mahatma Gandhi University, Kottayam, India. He is also a full professor of polymer science and engineering and the Director of the Centre for Nanoscience and Nanotechnology of the same university. He is a fellow of many professional bodies. Professor Thomas has authored or co-authored many papers in international peer-reviewed journals in the area of polymer processing. He has organized several international conferences and has more than 420 publications, 11 books and two patents to his credit. He has been involved in a number of books both as author and editor. He is a reviewer to many international journals and has received many awards for his excellent work in polymer processing. His h Index is 42. Professor Thomas is listed as the 5th position in the list of Most Productive Researchers in India, in 2008. Oluwatobi Samuel Oluwafemi, PhD, is a Senior Lecturer at the Department of Chemistry and Chemical Technology, Walter Sisulu University, Mthatha Campus, Eastern Cape, South Africa. He has published many papers in internationally reviewed journals and has presented at several professional meetings. He is a fellow of many professional bodies, a reviewer for many international journals, and has received many awards for his excellent work in material research. His current research interests include application of nanoparticles in medicine, water treatment, polymer, LEDs, and sensors. Josmin P. Jose is currently pursuing her PhD in nanocomposites at Mahatma Gandhi University, Kottayam, Kerala, India. She has presented papers at several conferences. Her area of interest is polymer nanocomposites for dielectric applications. Hanna J. Maria is a research scholar in the School of Chemical Sciences at Mahatma Gandhi University, Kottayam, Kerala, India. Her research interests include polymer-blend nanocomposites morphological analysis of polymer nanocomposites, mechanical properties of nanocomposites, gas transport through polymeric membranes, among other topics.