

## 新刊書紹介

— Nanoparticle Technology Handbook  
second edition—

今世紀に入ってにわかに注目を浴びていますナノテクノロジーの一つの重要な基盤となっていますナノ粒子の生成、評価、応用を中心としたナノパーティクルテクノロジーについて、日本から世界に情報発信することを目指して、Nanoparticle Technology Handbookの初版が2007年に出版されました。この度、初版の出版社エルゼビア社よりの依頼により、内容をさらに充実化して第2版が出版されました。この第2版は初版の構成を基にして、今回は基礎編の内容は変えず、応用編に新たな応用例を追加して出版することになりました。

## 目次：

## FUNDAMENTALS

- Chapter 1 : Basic properties and measuring method of nanoparticles  
Chapter 2 : Structural control of nanoparticles  
Chapter 3 : Characteristics and behavior of nanoparticles and its dispersion system  
Chapter 4 : Control of nanostructure of materials  
Chapter 5 : Characterization methods for nanostructure of materials  
Chapter 6 : Evaluation methods for properties of nanostructured body  
Chapter 7 : Environmental and safety issues with nanoparticles

**APPLICATIONS** (初刊に下記の項が追加され、合計60の応用例を紹介)

- ・ Nanoparticle synthesis, dispersion, and functionalization for industrial application
- ・ Synthesis of nanoparticles by RF induction thermal plasma
- ・ Self-assembly of oxide nanosheets : precise structural control and its applications]
- ・ Development of ceramic-bonded carbon
- ・ Development of dispersion and composing processes of nanoparticles and their application to advanced firefighter uniform
- ・ Creation of boron nitride nanotubes and possibility for a series of advanced nano-composite materials
- ・ PLGA nanoparticle design and preparation for DDS & medical device
- ・ Development of photonic crystal resonators for

terahertz wave sensing by using nanoparticle stereolithography

- ・ Practical issue of nano-sized colorant particles
- ・ Material design of electronic liquid powder<sup>TM</sup> used in novel-type bistable reflective display (QR-LPDTM)
- ・ Three-dimensional structural analysis of nanocomposite materials containing nanoparticulates
- ・ Powder technology and nanotechnology contributed for clean utilization of coal
- ・ Novel recycling of FRP by using nanoparticle bonding
- ・ Nonotechnology challenge in mechanochemistry
- ・ Superior thermal insulation film with transparency achieved by hollow silica nanoparticles
- ・ Development of nanoparticle composite technique for low Pt-loading PEFCs

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