

### Metallic Nanomaterials

The book *Metallic Nanomaterials* is the first of a series entitled *Nanomaterials for the Life Sciences*, edited by Challa Kumar. The subject of this volume is metallic colloidal nanoparticles. The editor has organized the articles contributed by different authors into three parts. Part I—"Copper, Silver and Gold Nanoparticles"—begins with two chapters about copper nanoparticles, both of which cover synthesis. The second chapter also reviews applications, with a special emphasis on copper nanoparticles in medical diagnosis. The next four chapters are devoted to silver nanoparticles and focus on synthesis, medical therapy, diagnosis by various optical techniques, and the effects of silver nanoparticles on health and environment. The last two chapters of Part I cover the synthesis of gold particles of different shapes and their applications in medical therapy.

Part II—"Palladium and Platinum Nanomaterials"—consists of two chapters covering the synthesis of spherical particles and anisotropic shapes of palladium and platinum, respectively. Part III is entitled "An Overview of Metallic Nanomaterials" and consists of four chapters. The first two chapters deal with the synthesis of different noble-metal particles and with the bio-assisted synthesis of nanoparticles. The last two chapters of the book focus on the application of gold nanoparticles in phototherapy of cancer and on the use of metallic nanoparticles in textiles, respectively.

In its essence, the book is devoted to the synthesis of Cu, Ag, Au, Pd, and Pt nanoparticles and to various applications of these. Other elements such as cobalt and nickel are not covered. Composite or alloyed particles can probably be expected in Volume 3 of the series, entitled *Bimetallic and Metal Oxide Nanomaterials*.

The field of colloidal nanoparticles has experienced a vigorous development over the last two decades, with a strong increase in the number of publications. It is therefore time to collect the achievements to give a bird's-eye view (a nice metaphor from the authors of the first chapter) for researchers who are not experts in the field, affording them access to the progress of recent years. For researchers already working in the field,

such review articles can be useful for learning about somebody else's perspective and about what is going on in neighboring fields.

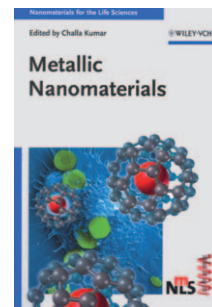
Although this book, and the series to which it belongs, attempt to cover the field of nanomaterials in a general manner, the reader should not expect to find a monograph in which the authors treat the subject in a coherent, maybe even a pedagogical manner, covering all the important aspects in a well-balanced and comprehensive way. The chapters are contributed by experts in their fields, which results in a collection of reviews that provide up-to-date and in-depth overviews about specific topics. However, this collection of independent chapters also results in a certain amount of overlap between the different articles, for example with regard to basic methods of synthesis or characterization. On the other hand, some of the individual chapters deal with rather specialized topics, such as the synthesis of particles with sophisticated shapes and structures, whereas, for example, the synthesis of gold and silver nanoparticles by reduction of the citrates is only mentioned rather briefly (in several chapters), even though it is by far the most commonly used route to such nanoparticles. As well as this to some extent natural "imbalance", it should also be mentioned that the articles differ in depth and in quality. However, these points of criticism are quite usual in a collection of contributed articles, in contrast to a monograph written by a single author.

In summary, this book provides a good overview of the special topics discussed, and many of the articles are of excellent quality. The discussions about the synthesis of shape-controlled nanoparticles are especially good. Researchers already familiar with the field will find valuable information and literature references about specific aspects, as well as complete and in-depth reviews of the respective subjects. Readers who are new to the field of nanoparticles should also read monographs or more general review articles about nanoparticles. Nevertheless, for those readers too, this book contains a lot of useful and enlightening information.

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