CHAPTER 4

ZnO Nanoparticles: Growth, Properties, and Applications

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CONTENTS

1. Introduction ......................................................... 1
2. Crystal Structure of ZnO ........................................... 2
3. Nanoparticles of ZnO ............................................. 2
4. Application of ZnO Nanoparticles ................................. 19
   4.1. ZnO Nanoparticles: Bio-Friendly Approach .............. 19
   4.2. Solar Cells, Photocatalytic, Photoluminescence, and Sensor Application of ZnO Nanoparticles .......................... 23
   4.3. Cosmetic Application of ZnO Nanoparticles .............. 33
5. Summary and Future Directions .................................. 34
References .............................................................. 34

1. INTRODUCTION

Today, nanotechnology (NT) is operating in various fields of science via its operation for materials and devices using different techniques at nanometer scale. Nanoparticles are a part of nanomaterials that are defined as single particles 1–100 nm in diameter. From last few years, nanoparticles have been a common material for the development of new cutting-edge applications in communications, energy storage, sensing, data storage, optics, transmission, environmental protection, cosmetics, biology, and medicine due to their important optical, electrical, and magnetic properties. In particular, the unique properties and utility of nanoparticles also arise from a variety of attributes, including the similar size of nanoparticles and biomolecules such as proteins and polynucleic acids. [1] Additionally, nanoparticles can be fashioned with a wide range of metals