Longtsong Ju, Lecturer Department of Computer Application Engineering, Far East University
Yung-Chiang Ting, Assistant Professor Department of Cosmetics Application and Management, Far East University

Abstract

This paper proposes a modified method of chemical reaction to produce nano-particles of iron oxide, we used the ferric chloride, ferrous chloride, hydrochloric acid, sodium hydroxide and other materials, after a mixture of different proportions, stirring, sedimentation, dehydration, cleaning and using the oven to dry the produce of nano-iron oxide powder instead of the nature dry. The morphology and size of nano-iron oxide powder were characterized by scanning electron microscopy and transmission electron microscopy, and the composition of nano-iron oxide powder was carried out by using the energy dispersive spectrometer and x-ray diffraction, and it confirmed that the products were iron oxide powder (Fe$_3$O$_4$).

Keywords: Nano materials, chemical reaction, iron oxide (Fe$_3$O$_4$)