

Insights into the Synthesis Parameters Effects on the Structural, Morphological, and Magnetic Properties of Copper Oxide Nanoparticles

Fatma Mbarek ^{1,*}, Ichraf Chérif ^{1,2}, Amira Chérif ³, José María Alonso ^{4,5}, Irene Morales ⁴, Patricia de la Presa ^{4,6} and Salah Ammar ¹

¹ Electrochemistry, Materials and Environment Research Unit, UREME (UR17ES45), Faculty of Sciences of Gabes, University of Gabes, Gabes 6072, Tunisia; cherif.ichraf@yahoo.fr (I.C.); salah.ammar@fsg.rnu.tn (S.A.)

² Higher Institute of Education and Continuous Training of Tunis, Virtual University of Tunis, Tunis 1073, Tunisia

³ University of Tunis El Manar, Faculty of Sciences of Tunis, Laboratory of Materials Organization and Properties, Tunis 2092, Tunisia; cherifamira3008@gmail.com

⁴ Institute of Applied Magnetism, Complutense University of Madrid, A6 22,500 Km, 28230 Las Rozas, Spain; jm.a.r.0@csic.es (J.M.A.); irenemorales@ucm.es (I.M.); pmpresa@ucm.es (P.D.I.P.)

⁵ Institute of Materials Sciences of Madrid, CSIC, Sor Juana Ines de la Cruz 3, 28049 Madrid

⁶ Department of Material Physics, Complutense University of Madrid, Plaza de la Ciencia 1, 28040 Madrid, Spain

* Correspondence: fatma.mbarek@fsg.rnu.tn; Tel.: +216-50683270

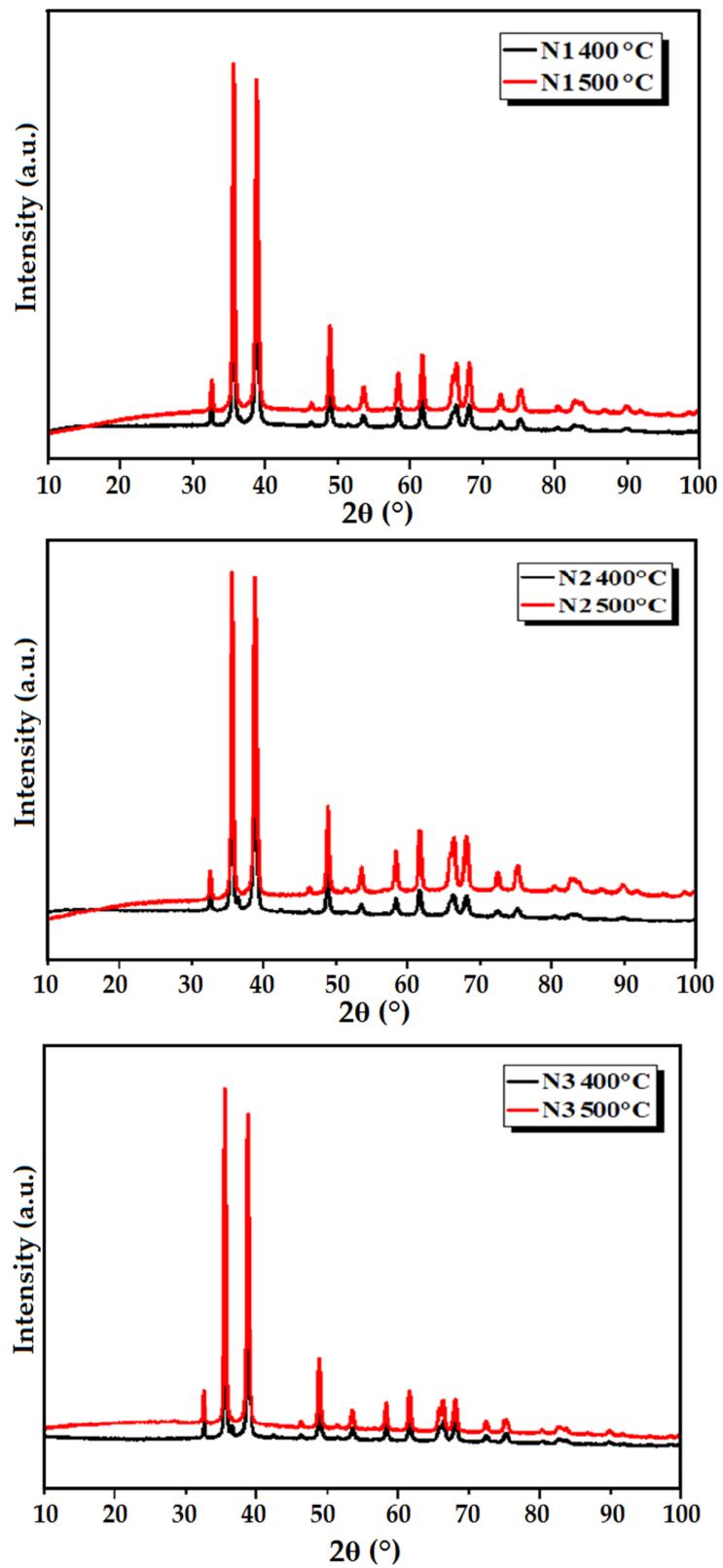


Figure S1. XRPD patterns for N1, N2, and N3 samples synthesized at 400 and 500 °C.