Oswald N. C. Uwakweh, Ph. D.

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Professional Experience

- 2006 –present Professor of Materials Science and Engineering
- 2001-2006 Associate Professor of Materials Science and Engineering Department, University of Puerto Rico, Mayagüez
- 2005-present Honorary Fellow in the Department of Materials Science and Engineering, University of Wisconsin, Madison
- 2004, 2005 ASEE Senior Summer Faculty Fellow, Naval Air Warfare Center, Patuxent River, MD
- 2002 ASEE Summer Faculty Fellow, Naval Air Warfare Center, Patuxent River, MD
- 1999-2001 Metallurgical Engineering Consultant, Cincinnati Global Inc., Cincinnati
- 1991-1998 Assistant Professor, Materials Science and Engineering, University of Cincinnati, Cincinnati, OH

Professional Preparation

- University of Ibadan, Nigeria Mechanical Engineering, B.S. 1981
- University of Nancy, Nancy, France Materials Science and Engineering, M.S. 1985
- University of Nancy, Nancy, France Materials Science and Engineering, Ph.D. 1990

Selected Publications and Presentations

- Oswald N. C. Uwakweh: "The use of Cambridge Materials Selector in Enhancing Graduate Studies in Materials Science and Engineering Education" Under press: Journal of Materials Education, Vol. 28 (3-6): P365-372.
- Oswald N. C. Uwakweh and C. T. Liu: "Mössbauer effect measurement evidence for magnetic transition in ordered Fe-doped NiAl": Under press: Journal submitted: Intermetallics
- Elba Sanchez, Samuel Charca, Oscar Rosalles, O. N. C. Uwakweh, and Vinod Agarwala: "Hydrogen Permeation Study of Nanostructured Zn-Ni/Zn-Ni-X Coatings on low carbon steel": Presented at: NACE-Corrosion 2006 Meeting, March 11 -16, San Diego, California, USA
- Perez Moyet Richard, Yong-Jihn Kim, Oswald Uwakweh, and Eric Hellstrom: "Elucidating strong coupling between E2g phonon mode and electrons in MgB2 ": Presented at: The American Physical Society (APS) March (10-17) Meeting, Baltimore, Maryland, USA

- O. N. C. Uwakweh, J. F. Silvain and J.-M.R. Genin, “Electron Microscopy Study of the Aging and First Stage Tempering of High Carbon Martensites”: Metall. Trans.,A., 22, 797-806, (1991)
- O. N. C. Uwakweh, Zhentong Liu, Aszetta Jordan, Bryan Chakoumakos, Stephen Spooner, and Philip Maziasz, “Neutron Diffraction & Phase Evaluation of the Mechanically alloyed Intermetallic Compound ζ-FeZn” Metall. and Mat Trans A 31, 2739-2745 (2000).
- Z.T. Liu and O.N.C. Uwakweh: “Mechanical alloying and magnetic properties of Nd2Fe17 and mixed Nd2Fe17/Nd5Fe17/(Nx) phase powders”: Journal of Materials Synthesis and Processing 5, 135-140 (1997).
- O.N.C. Uwakweh and J.-M.R. Genin: “Morphology and aging of the martensite induced by cathodic hydrogen charging of high-carbon austenitic steels”: Metallurgical Transactions A 22, 1979-1991 (1991).
- O. N. C. Uwakweh, J.-M.R. Genin, and J.-F. Silvain: “Hydrogen cathodic charging of a high carbon binary steel and martensitic induced transformation”: Scripta Metallurgica et Materialia 24, 1075-1079 (1990).
- O. N. C. Uwakweh, J.-M.R. Genin, and J.-F. Silvain: “Electron microscopy study of the aging and first stage of tempering of high-carbon Fe-C martensite”: Metallurgical Transactions A (Physical Metallurgy and Materials Science) 22A, 797-806 (1991).
- O. N. C. Uwakweh and A. Jordan: “Application of metastable transformation of mechanically alloyed Fe-Zn-Si in equilibrium phase studies”: Journal of Phase Equilibria 18, 448-457 (1997).

Synergistic Activities

- Coordinator: Materials Science and Engineering Curriculum Review Committee, University of Puerto Rico, Mayagüez
- Member of ASM-Phase Transformation Committee
- FEF key Professor, University of Cincinnati, Cincinnati, OH (1993-1997).
- Partnership with US National Laboratories: Perform neutron diffraction, electron microscopy, and high temperature intermetallic alloys design, Pulse Thermal Processing (PTP) based on Rapid Infrared heating techniques at Oak Ridge National Laboratory with the Solid State Division, and the Metals & Ceramics groups.
- Scholarly review: (1992-present) Reviewer of professional journals such as Metallurgical and Materials Transactions A; Journal of Materials Engineering Research, Journal of Physics, etc; (1999-present) Cooperative Grants Program of the U.S. Civilian Research & Development Foundation (CRDF)

Collaborators and Other Affiliations

- **Collaborators**
  - Dr. Eric Hellstrom: Professor of Materials Science and Engineering, University of Wisconsin, Madison
  - Dr. Vinod Agarwala, Senior Staff Scientist – Materials Engineering, Research & Engineering Group, Naval Air Systems Command, Patuxent River, MD

- Dr. C. T. Liu, Senior Corporate Fellow and Group Leader, Metals and Ceramic Group, Oak Ridge National Laboratory (ORNL), Oak Ridge, TN
- Dr. Craig Blue, Materials Processing Group, Infrared Processing Center, Metals and Ceramic Group, Oak Ridge National Laboratory (ORNL), Oak Ridge, TN
- Dr. Philip Maziasz, Senior Alloy Development Engineer, Metals and Ceramic Group, Oak Ridge National Laboratory (ORNL), Oak Ridge, TN

Thesis and Dissertation Sponsor

- **Graduate and postdoctoral advisors**
  - Ph.D.: Professor J. M.-R. Genin, C. N. R. S., Ecole Superieure des Sciences and Technologies de l'Ingenieur de Nancy (ESSTIN), Universite de Henri Poincare Nancy, France.
- **Graduate students advised**
  - Primary Advisor: MS: 5 Ph.D.:2 Currently Advising: MS: 3 Ph.D.: 1
  - Co-advised: MS: 23 Ph.D.: 17

Honors and Awards

- French Government Scholar: 1982-1990
- Nominated for the Bradley Stanghton Young Teacher Award: University of Cincinnati, OH: 1996
- Foundry Education Foundation Key Professor: University of Cincinnati, Cincinnati, OH: 1993-1996