**Curriculum Vitae**

**Leroy Salary, Jr.**

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**Career Objective**:

I am interested in crystal growth and characterization of high quality single bulk crystals and characterization using methods such X-ray crystallography.

**Current Position:**

2000-present Assistant Professor: Physics Department, Norfolk State University

**Education and Training:**

Alabama A&M University Huntsville, AL Physics PhD, 1999

Fisk University Nashville, TN Physics MS, 1995

Fisk University Nashville, TN Physics BS, 1993

**Professional Experience:**

2000-Present Assistant Professor, Norfolk State University, Norfolk, VA

1999-2000 Assistant Professor, Hampton University, Hampton, VA

**Awards and other Professional Activities:**

2018 - 2024 NSF PREM Grant Award

2005-2006 Research Leave to Kansas State University NSF Funded Grant (Modern Miracles in Medicine)

2000-2006 Member of CMR CREST Research Award

**Teaching:**

**Undergraduate:**

General Physics and related physics courses

**Graduate and Professional**:

Single crystal growth of various nonlinear and optical materials using the Bridgman, Top-Seeded-Solution, and Float Zone techniques.

**Research Interests:**

1. Crystal Growth and Characterization of various materials for use in optical and non-linear optical fields such as quantum computing, electro-optical devices, frequency doubling etc. Present research involves the single crystal growth of ferromagnetic materials using floating zone and Bridgman methods. Crystallinity is verified by a variety of techniques to include X-ray diffraction and optical microscopy. Special interest is given to optimizing the technique to grow high quality large single crystals.

2. Physics Education Research: I am developing a two-stage pedagogical effort, which involves both research in student learning and development of educational materials. The effort employs Project Based Learning and its affect on African American Students in the College Physics course. PBL is one of the unique learning styles that have been used in Business courses throughout several years. PBL method can be employed to aide the difficulty in transferring information learned in the algebra-based physics course/laboratory to future careers.

**Publications**

1. U. Hömmmerich, J. T. Seo, A. Bluiett, M. Turner, A. Bluiett, D. Temple, L. Salary, S. B. Triveki, H. Zong, S. W. Kutcher, C. Wang and R. Chen, "***Growth, Spectroscopy and Mid-Infrared Laser Performance of Cr2+ Doped Cadmium Manganese Telluride***," MRS Fall Meeting, Symposium OO, Boston, MA (1999)
2. L. Salary, Jr., R. B. Lal, W. S. Wang, M. D. Aggarwal, and B. G. Penn, “***Growth and morphology of the nonlinear optical crystal 3-methoxy-4-hydroxy-benzaldehyde (MHBA)***,” Proc. SPIE 3793, Operational Characteristics and Crystal Growth of Nonlinear Optical Materials, 29 (1999)
3. K. T. Chen, L. Salary, A. Burger, E. Soria, Aa. Antolak, and R. B. James, “***Chemical analysis of metal impurity distribution of zone-refined mercuric iodide by ICP-AES and DSC***,” Nuclear Inst. And Methods in Physics Research: Accelerators, Spectrometers, Detectors and Associated Equipment [Volume 380, Issues 1–2](http://www.sciencedirect.com/science/journal/01689002/380/1), 53-57 (1996)
4. T. E. Schlesinger, R. B. James, M. Schieber, J. Toney, J. M. Van Scyoc, L. Salary, H. Hermon, J. Lund, A. Burger, K. Chen, E. Cross, E. Soria, K. Shah, M. Squillante, H. Yoon, and M. Goorsky, “***Characterization of lead iodide for nuclear spectrometers***,” Nuclear Inst. And Methods in Physics Research, A, Volume 380, Issue 1, p. 193-197 (1996)
5. S. U. Eqarieve, U. Stephen, L. Salary, K. Tong, A. Burger, and R. B. James, “***Performances of CdTe and Cd1-xZnxTe gamma-ray detectors at elevated temperatures***,” Proceedings of the SPIE, Volume 2305, p. 167-173 (1994)

**Synergistic Activities**

1. Operation of Planetarium for outreach
2. Coordinator for Summer Research Experience, Summer 2001-2008 and Summer 2019 under LS-AMP grant.
3. Faculty advisor undergraduate freshman students, 2000-present.