

Curriculum Vitae

Daniel E.M. Hoff

Current Position:

Research Associate *University of Massachusetts, Lowell*

Education:

2018:

Ph.D Nuclear Chemistry *Washington University in St. Louis*

Advisor: Lee Sobotka

Thesis: *Spin Alignment in Inelastic Nuclear Reactions*

2013:

B.A. Physics with honors *University of Chicago*

B.S. Mathematics *University of Chicago*

Publications:

2019:

Hoff, D.E.M., Rogers, A.M., Wang, S.M. (王思敏) et al. *Nuclear mirror symmetry cracks in strontium-73* Under Review by Nature

Webb, T.B. et al. *Particle decays of levels in $^{11,12}\text{N}$ and ^{12}O investigated with the invariant-mass method* Physical Review C 100 (2), 024306.

Webb, T.B. et al. *First Observation of Unbound ^{11}O , the Mirror of the Halo Nucleus ^{11}Li* Physical Review Letters 122 (12), 122501.

2018:

Hoff, D.E.M et al. *Large Longitudinal Spin Alignment Generated in Inelastic Nuclear Reactions* Physical Review C 97 (5), 054605.

Patch, S.K., Hoff, D.E.M., Webb, T.B., Sobotka, L.G., Zhao, T *Two-stage ionoacoustic range verification leveraging Monte Carlo and acoustic simulations to stably account for tissue inhomogeneity and accelerator-specific time structure- A simulation study* Med. Phys., 45: 783–793.

2017:

Hoff, D.E.M, Charity, R.J. et al. *Large Longitudinal Spin Alignment of Excited Projectiles in Intermediate Energy Inelastic Scattering* Phys. Rev. Lett. 119, 232501.

2015:

Hoff, D.E.M., Barnes, A.B. et al. *Frequency swept microwaves for hyperfine decoupling and time domain dynamic nuclear polarization* Solid State Nuclear Magnetic Resonance, Volume 72, 2015, 79-89.

Research Experience:

2018-Present:

Research Associate *University of Massachusetts, Lowell*

2014-2018:

Graduate Research Assistant *Washington University in St. Louis*
Advisor: Dr. Lee Sobotka

2013-2014:

Staff Scientist *Washington University in St. Louis*
Advisor: Dr. Alexander Barnes

2010-2012:

Research Assistant *University of Chicago*
Advisor: Dr. Scott Wakely

2009:

Research Assistant *Washington University in St. Louis*
Advisor: Dr. James Buckley

Teaching Experience:

Fall 2019:

Instructor for Phy 1440 Electromagnetism *University of Massachusetts, Lowell*
Second Semester Physics Lecture
Section Size: 10 undergraduates

Fall 2017:

Teaching Assistant for Chem 460 Radiochemistry *Washington University in St. Louis*
Upper Level Undergraduate/Graduate Student Lab.
Class Size: 3 Undergraduates

2014-2016:

Teaching Assistant for Chem 151/152 General Chemistry Lab *Washington University in St. Louis*
Introductory Level Undergraduate Lab.
Class Size: 20 Undergraduates

Conferences and Talks:

2019:

Poster at Nuclear Chemistry Gordon Conference

^{73}Sr β -delayed proton emission and the structure of ^{73}Rb

Talk at April Meeting of APS

A Radio-Frequency Fragment Separator (RFFS) for FRIB

2018:

Talk at April Meeting of APS

Large Longitudinal Spin Alignment Generated in Inelastic Nuclear Reactions

Poster at April Meeting of APS

ASICs for FRIB

Poster at SSAP Symposium

Producing Huge Spin Alignment of Inelastically Scattered Projectiles in Clustered Nuclei

Received Poster Award

2017:

Invited Talk at Los Alamos National Laboratory (LANL) Nuclear Data Seminar

Large Longitudinal Spin Alignment of Excited Projectiles in Intermediate Energy Inelastic Scattering

Poster/Talk at Nuclear Chemistry Gordon Conference

Producing Huge Spin Alignment of Inelastically Scattered Projectiles in Clustered Nuclei

Selected to Give Talk based on Poster Session Vote

2015:

Poster/Talk at Exotic Beam Summer School

Spin Alignment of Excited Projectiles

Selected to Give Talk based on Poster Session Vote

2014:

Poster at Rocky Mountain Conference on Magnetic Resonance

Frequency Agile Gyrotron for DNP and Electron Decoupling