NSF BIOGRAPHICAL SKETCH

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IDENTIFYING INFORMATION:

NAME: Berry, Joseph, J

ORCID: 0000-0003-3874-3582

POSITION TITLE: Associate Professor of Physics

ORGANIZATION AND LOCATION: University of Colorado Boulder, Boulder, CO, USA

Professional Preparation:

ORGANIZATION AND LOCATION	DEGREE (if applicable)	DATE RECEIVED	FIELD OF STUDY
NRC Fellow National Institute of Standards and Technology (NIST/JILA) , Boulder, Colorado, USA	Postdoctoral Fellow	2001 - 2004	Physics
The Pennsylvania State University, University Park, Pennsylvania, USA	PHD	2001	Physics
Goshen College, Goshen, Indiana, USA	BA	1994	Physics and Mathematics

Appointments and Positions

2021 - present Associate Professor of Physics, University of Colorado Boulder, Department of Physics, Boulder, CO, USA

2020 - present Senior Research Fellow, National Renewable Energy Laboratory, Golden, CO, USA

2020 - present Fellow, Renewable and Sustainable Energy Institute (RASEI), Boulder, CO, USA

2015 - 2018 Detailee, U.S. Department of Energy Basic Energy Sciences, Condensed Matter Physics Program , Golden, CO, USA

2004 - 2006 Research Associate, National Institute of Standards and Technology , Boulder, CO, USA

Products

Products Most Closely Related to the Proposed Project

1. Kim YH, Zhai Y, Gaulding EA, Habisreutinger SN, Moot T, Rosales BA, Lu H, Hazarika A, Brunecky R, Wheeler LM, Berry JJ, Beard MC, Luther JM. Strategies to Achieve High Circularly Polarized Luminescence from Colloidal Organic-Inorganic Hybrid Perovskite Nanocrystals. ACS Nano. 2020 Jul 28;14(7):8816-8825. PubMed PMID: 32644773.
2. Lu H, Xiao C, Song R, Li T, Maughan AE, Levin A, Brunecky R, Berry JJ, Mitzi DB, Blum V, Beard MC. Highly Distorted Chiral Two-Dimensional Tin Iodide Perovskites for Spin Polarized Charge Transport. J Am Chem Soc. 2020 Jul 29;142(30):13030-13040. PubMed PMID: 32602710.
3. Lu H, Wang J, Xiao C, Pan X, Chen X, Brunecky R, Berry JJ, Zhu K, Beard MC, Vardeny ZV.

Spin-dependent charge transport through 2D chiral hybrid lead-iodide perovskites. Sci Adv. 2019 Dec;5(12):eaay0571. PubMed Central PMCID: PMC6897542.

4. Malajovich I, Berry JJ, Samarth N, Awschalom DD. Persistent sourcing of coherent spins for multifunctional semiconductor spintronics. Nature. 2001; 411(6839):770---772.
5. Berry JJ, Potashnik SJ, Chun SH, Ku KC, Schiffer P, Samarth N. Two-carrier transport in epitaxially grown MnAs. Physical Review B. 2001; 64(5):052408.

Other Significant Products, Whether or Not Related to the Proposed Project

1. Christians J, Schulz P, Tinkham J, Schloemer T, Harvey S, Tremolet de Villers B, Sellinger A, Berry J, Luther J. Tailored interfaces of unencapsulated perovskite solar cells for >1,000 hour operational stability. Nature Energy. 2018 January 09; 3(1):68-74. Available from: https://www.nature.com/articles/s41560-017-0067-y DOI: 10.1038/s41560-017-0067-y
2. Tong Jinhui, Song Zhaoning, Kim Dong Hoe, Chen Xihan, Chen Cong, Palmstrom Axel F, Ndione Paul F, Reese Matthew O, Dunfield Sean P, Reid Obadiah G, Liu Jun, Zhang Fei, Harvey Steven P, Li Zhen, Christensen Steven T, Teeter Glenn, Zhao Dewei, Al-Jassim Mowafak M, van Hest Maikel FAM, Beard Matthew C, Shaheen Sean E, Berry Joseph J, Yan Yanfa, and Kai Zhu. Carrier lifetimes of> 1 $$\backslash$mu$s in Sn-Pb perovskites enable efficient all-perovskite tandem solar cells. Science. 2019; :eaav7911.
3. Laura T Schelhas, Zhen Li, Jeffrey A Christians, Anuj Goyal, Paul Kairys, Steven P Harvey, Dong Hoe Kim, Kevin H Stone, Joseph M Luther, Kai Zhu, Vladan Stevanovic, Joseph J Berry. Insights into operational stability and processing of halide perovskite active layers. Energy & Environmental Science. 2019.
4. Steirer K Xerxes, Schulz Philip, Teeter Glenn, Stevanovic Vladan, Yang Mengjin, Zhu Kai, Berry Joseph J. Defect Tolerance in Methylammonium Lead Triiodide Perovskite. ACS Energy Letters. 2016; :360---366. Available from: http://pubs.acs.org/doi/abs/10.1021/acsenergylett.6b00196 uri: http://pubs.acs.org/doi/abs/10.1021/acsenergylett.6b00196
5. Li Zhen, Yang Mengjin, Park Ji-Sang, Wei Su-Huai, Berry Joseph J, Zhu Kai. Stabilizing Perovskite Structures by Tuning Tolerance Factor: Formation of Formamidinium and Cesium Lead Iodide Solid-State Alloys. Chemistry of Materials. 2016; 28(1):284---292. Available from: http://pubs.acs.org/doi/abs/10.1021/acs.chemmater.5b04107 uri: http://pubs.acs.org/doi/abs/10.1021/acs.chemmater.5b04107

Synergistic Activities

1. 2021-Present ACS Energy Editorial Advisory Board Member
2. 2020-Present Member, Board of Reviewing Editors (BoRE) Science AAAS
3. 2010 Served as professor for the African University of Science and Technology, teaching a graduate level material science course (MS617) “Electronic Photonic and Magnetic Materials”
4. Reviewer for: DOE BES, NSF, and various Journals (Nature, Nature Energy, etc)
5. Symposium organizer for MRS, APS

Certification:

When the individual signs the certification on behalf of themselves, they are certifying that the information is current, accurate, and complete. This includes, but is not limited to, information related

to domestic and foreign appointments and positions. Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

Certified by Berry, Joseph, J in SciENcv on 2023-02-10 20:31:25