Curriculum Vitae – 2014 to 2016
Laurence A.J. Garvie

Work

Center for Meteorite Studies
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Education

University of Bristol, Department of Geology, U.K., 1987 to 1991
Ph.D. 1992, Mineralogy and Computing

University of London, Department of Geochemistry, U.K., 1983 to 1986
B.Sc. (Hons.), Geochemistry with Mathematics

Proposals Funded

Investigation of nanoprecipitates within meteoritic metals as tracers of early Solar System processes. L.A.J. Garvie (PI). NASA Emerging Worlds Program. 2017 to 2020, awarded.

Observational and theoretical investigations of the formation of igneous rims around chondrules. M. Morris (PI), D.S. Burnett (PI), L.A.J. Garvie (co-PI). NASA Emerging Worlds Program, 2015 to 2017, awarded.

Meteorite Donations

I continue to stress to private meteorite collectors and dealers the importance of their meteorite donations to the CMS. Through my contacts and networking, I have brought in meteorite donations totaling $535,899 over the last three years.
2014 - $323,016
2015 - $19,347
2016 - $193,536
total - **$535,899**

CMS meteorite growth

New acquisitions are core to the CMS. They also ensure that the SESE/CMS collection remains the #1 university-based collection in the world. The following are the new falls/finds numbers for the last three years.
2014 - 180
2015 - 35
2016 – 21
total - 236

Papers published and/or submitted in 2014-16:

Garvie, L.A.J., Knauth, L.P. and Morris, M.A. (2017) Sedimentary laminations in the Isheyevo (CH/CBb) carbonaceous chondrite formed by gentle impact-plume sweep up. Icarus (in press).

Garvie, L.A.J. (2016) Mineralogy of paloverde (*Parkinsonia microphylla*) ash. American Mineralogist, 101, 1584-1595.

Mane, P., Hervig, R., Wadhwa, M., **Garvie, L.A.J.**, Balta, J.B., and McSween, H.Y.Jr. (2016) Hydrogen isotopic composition of the Martian mantle inferred from the newest Martian meteorite fall Tissint, Meteoritics and Planetary Sciences, 51, 2073-2091.

Cotto-Figueroa, D., Asphaug, E., **Garvie, L.A.J.**, Rai, A., Johnston, J., Borkowski, L., Datta, S., Chattopadhyay, A., and Morris, M.A. (2016) Scale-dependent measurements of meteorite strength: implications for asteroid fragmentation. Icarus, 277, 73-77.

Aoki, T., **Garvie, L.A.J.** and Rez, P. (2015) Observation of color center peaks in calcium fluoride. Ultramicroscopy, 153, 40-44.

Németh, P., **Garvie, L.A.J.**, and Buseck, P.R. (2015) Twinning of cubic diamond explains reported nanodiamond polymorphs, Scientific Reports, 5, Article#18381.

Garvie, L.A.J., Wilkens, B., Groy, T.J. and Glaeser, J.A. (2015) Substantial production of drosophilin A methyl ether (tetrachloro-1,4-dimethoxybenzene) by the lignicolous basidiomycete *Phellinus badius* in the heartwood of mesquite (*Prosopis juliflora*) trees. The Science of Nature, 102, 8pp.

Morris, M.A., **Garvie, L.A.J.** and Knauth, L.Paul (2015) New insights into the Solar System's transition disk phase provided by the metal-rich carbonaceous chondrite Isheyevo. Astrophysical Journal Letters, 801: L22 (5 pp).

Pizzarello S. and **Garvie, L.A.J.** (2014) Sutter's Mill dicarboxylic acids as possible tracers of parent-body alteration processes. Meteoritics and Planetary Sciences, 49, 2087-2094.

Németh, P., **Garvie, L.A.J.**, Aoki, T., Dubrovinskaia, N., Dubrovinsky, L. and Buseck, P.R. (2014) Lonsdaleite is faulted and twinned cubic diamond and does not exist as a discrete material. Nature Communications, 5, art#5447.

Garvie, L.A.J., Nemeth, P. and Buseck, P.R. (2014) Transformation of graphite to diamond via a topotactic mechanism. American Mineralogist, 99, 531-538.

Meteorites Classified and incorporated into the Meteorical Bulletin Database

Kuresoi, L6, http://www.lpi.usra.edu/meteor/index.php?code=60305
Northwest Africa 8486, Ungrouped achondrite, http://www.lpi.usra.edu/meteor/index.php?code=60259
Katol, L6; http://www.lpi.usra.edu/meteor/index.php?code=58500
Thika, L6; http://www.lpi.usra.edu/meteor/index.php?code=54493
Little Harquahala Mountains, H-melt rock; http://www.lpi.usra.edu/meteor/index.php?code=53484
Los Vientos 001, Diogenite-pm; http://www.lpi.usra.edu/meteor/index.php?code=54671
Northwest Africa 6991, CV3; http://www.lpi.usra.edu/meteor/index.php?code=54567
Apache Junction, Iron, IIIAB; http://www.lpi.usra.edu/meteor/index.php?code=54566
Sterley, Pallasite, PMG; http://www.lpi.usra.edu/meteor/index.php?code=56575
Northwest Africa 8164, CK6; http://www.lpi.usra.edu/meteor/index.php?code=58495

Northwest Africa 7916, CO3; http://www.lpi.usra.edu/meteor/index.php?code=57624
Catalina 037, Ureilite; http://www.lpi.usra.edu/meteor/index.php?code=57460
Red Dry Lake 067, L3.4; http://www.lpi.usra.edu/meteor/index.php?code=52886
Nothing, Iron, IID; http://www.lpi.usra.edu/meteor/index.php?code=58084
Dhofar 1619, CM2; http://www.lpi.usra.edu/meteor/index.php?code=52887
Shawnee, Iron, IAB-MG; http://www.lpi.usra.edu/meteor/index.php?code=53761
Jbilet Winselwan, CM2; http://www.lpi.usra.edu/meteor/index.php?code=57788
Blakeman, L4; http://www.lpi.usra.edu/meteor/index.php?code=56564
Sayh al Uhaymir 559, Ureilite; http://www.lpi.usra.edu/meteor/index.php?code=57462
Aubrey Hills, H6; http://www.lpi.usra.edu/meteor/index.php?code=56393
Oldman Mountain, H5; http://www.lpi.usra.edu/meteor/index.php?code=56392
Llano River, Iron, IIIAB; http://www.lpi.usra.edu/meteor/index.php?code=53635
Agoudal, Iron, IIAB; http://www.lpi.usra.edu/meteor/index.php?code=57354
Ouadangou, L5; http://www.lpi.usra.edu/meteor/index.php?code=56729
Northwest Africa 8234, Mesosideerite C2; http://www.lpi.usra.edu/meteor/index.php?code=59580
Jiddat al Harasis 845, Mesosiderite-C2; http://www.lpi.usra.edu/meteor/index.php?code=59600
Red Canyon Lake, H5; http://www.lpi.usra.edu/meteor/index.php?code=53502
Calama 001, Ureilite; http://www.lpi.usra.edu/meteor/index.php?code=58724
Paposo 017, CR2; http://www.lpi.usra.edu/meteor/index.php?code=60271
Sayh al Uhaymir 562, Eucrite-unbr; http://www.lpi.usra.edu/meteor/index.php?code=57668
Northwest Africa 8383, Eucrite-cm; http://www.lpi.usra.edu/meteor/index.php?code=59601
Puente-Ladron, L6; http://www.lpi.usra.edu/meteor/index.php?code=18895
Northwest Africa 8169, L6; http://www.lpi.usra.edu/meteor/index.php?code=58510
Northwest Africa 8233, H6; http://www.lpi.usra.edu/meteor/index.php?code=58725
Northwest Africa 8563, Eucrite-mmict; http://www.lpi.usra.edu/meteor/index.php?code=60976
Creston, L6; http://www.lpi.usra.edu/meteor/index.php?code=62546
Northwest Africa 10074, acapulcoite; http://www.lpi.usra.edu/meteor/index.php?code=61695
Yucca 031, H6; http://www.lpi.usra.edu/meteor/index.php?code=61636
Northwest Africa 10102, L(LL)3; http://www.lpi.usra.edu/meteor/index.php?code=61770
San Juan de Ocotán, L5; http://www.lpi.usra.edu/meteor/index.php?code=62608
Bumble Bee, H6; http://www.lpi.usra.edu/meteor/index.php?code=62611
Northwest Africa 10460, H4; http://www.lpi.usra.edu/meteor/index.php?code=62648
Nkayi, L6; http://www.lpi.usra.edu/meteor/index.php?code=61585
Northwest Africa 10519, Enst achon-ung; http://www.lpi.usra.edu/meteor/index.php?code=62763
Kamargaon - www.lpi.usra.edu/meteor/metbull.php?code=63102
Catalina 001 - www.lpi.usra.edu/meteor/metbull.php?code=58496
Tank Mountains – www.lpi.usra.edu/meteor/metbull.php?code=64058
Parker – www.lpi.usra.edu/meteor/metbull.php?code=63103
NWA 10617 - www.lpi.usra.edu/meteor/metbull.php?code=63162