Graham M. King

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Education

Ph.D. Chemistry, March, 2010
The Ohio State University (Columbus, OH, USA)

B.S. Chemistry, February, 2005
State University of New York at Buffalo (Buffalo, NY, USA)

Professional Experience

Staff Scientist, Canadian Light Source 2018-present

Lead scientist for the High Energy Wiggler Beamline at the Brockhouse sector. Responsible for developing and running the user program, enhancements of the beamline, delegation of tasks to science associates, and conducting a personal research program.

Independent Research Consultant 2017

Worked as a self-employed contractor performing local structure analysis.

Staff Scientist, Los Alamos National Laboratory 2013-2016

Responsible for the operation of the HIPD neutron diffractometer and the science program of this instrument. Co-responsible for the NPDF instrument. Research topics include advanced powder crystallography, magnetic structure determination, and pair distribution function analysis. Managed several work-for-others contracts with industrial partners.

Postdoctoral Associate, Los Alamos National Laboratory 2010-2013
Mentor: Dr. Anna Llobet

Research efforts were mainly focused on the study of the local structures of inorganic extended solids using the pair distribution function method. Also worked in the areas of crystal and magnetic structure determination. Assisted in the operation of the HIPD and NPDF neutron diffractometers and Lujan Center user program. Supervised the research of an undergraduate summer student.

Graduate Associate, The Ohio State University 2005-2010
Advisor: Prof. Patrick M. Woodward

Main project involved the synthesis, structural, magnetic, and electronic characterization of new perovskite compounds which have ordering on both the *A* and *B*-cation sub-lattices for potential application as multiferroic materials. Methods include X-ray and neutron powder diffraction, SQUID magnetometry, UV-Vis diffuse reflectance spectroscopy, impedance spectroscopy, and differential scanning calorimetry. Other projects involved the *ab initio* structure determination of usually complex perovskites as well as molecular compounds from powder diffraction data. Supervised the research of three undergraduate students. Taught general chemistry courses for 10 quarters.

Undergraduate Research Assistant, SUNY Buffalo 2004-2005
Advisor: Prof. Philip Coppens

Projects involved crystal structure determination by single crystal X-ray diffraction including time resolved studies of photo-induced excited state molecular geometries, and the synthesis and crystal growth of coordination compounds.

Publications

Summary: 113 total papers, 7,000+ total citations, *h*-index 38

113) Ait Harrouch, K., Jouini, M., Dynes, J.J., King, G., Sakkali, M., Vergutz, L., Raji, O., Benzaazoua, M., Elghali, A., **Mechanistic insights into $CaCl_2$-assisted chlorination roasting of K-bearing syenite: an in-situ synchrotron X-ray diffraction and thermodynamic study.** *Miner. Eng.* (2026) **250,** 110883.

112) Singh, S., Burnside, B., King, G., Pham, H. N., Datye, A. K., Scott, R. W. J., **Anomalous Structural and Catalytic Behavior of Strained Pd Nanoparticles.** *ACS Appl. Mater. Interfaces* (2026) **18(35),** 47688-47701.

111) Latypova, R., Nyo, T. T., Seppala, O., Ruoppa, R., Kauppi, T., Singh, H., Huttula, M., King, G., Pallaspuro, S., Komi, J. **Hydrogen embrittlement resistance of low-temperature tempered direct-quenched martensitic steel.** *Eng. Fract. Mech.* (2026) **345,** 112540.

110) Olszowka, J. E., Sydorchuk, V., Simkovicova, K., Sajad, M., Clet, G., Horacek, M., King, G., Pasztor, J., Vajda, S., **Milling-Induced Defects in Ni/Zirconia Catalysts for Enhancing Catalytic Activity in Dry Methane Reforming.** *J. Phys. Chem. C* (2026) **130(11)** 4141-4152.

109) Yu, Q., Hu, Y., Deng, S., Shakouri, M., King, G., Chang, L.-Y., Zaghib, K., Sham, T.-K., Li, X., **Catalyzed anionic redox in sulfide electrolytes for high-energy all-solid-state organic batteries.** *Joule* (2026) **10(4),** 102297.

108) Sibav, L., Knaflic, T., King, G., Jaglicic, Z., Koblar, M., Povarov, K., Zvyagin, S., Arcon, D., Dragomir, M., **Influence of La Doping on the Magnetic Properties of the Two-Dimensional Spin-Gapped System $SrCu_2(BO_3)_2$.** *Inorg. Chem.* (2025) **65,** 291-302.

107) Zhao, F., Zhang, S., Wang, S., Reid, J. W., Xia, W., Liu, J., King, G., Kaduk, J. A., Liang, J., Luo, J., Gao, Y., Yang, F., Zhao, Y., Li, W., Alahakoon, S. H., Guo, J., Huang, Y., Sham, T.-K., Mo, Y., Sun, X., **Anion sublattice design enables superionic conductivity in crystalline oxyhalides.** *Science* (2025) **300,** 6769, 199-204.

106) Guo, Z., Lai, F., Song, B., Wang, S., Singh, H., Talebi, P., Zhu, L., Niu, Y., King, G., Huang., Geng, B. **Scalable synthesis of amorphous NiFe oxide hollow microspheres *via* glucose-mediated spray pyrolysis for industrial hydrogen production.** *Energy Environ. Sci.* (2025) **18,** 8549.

105) Wang, Y., Heidari, A., Singh, H., King, G., Wang, S., Chuproski, R. F., Huttula, M., Fabritius, T., Urpelainen, S., ***In Situ* SXRD Study of Phase Transformations and Reduction Kinetics in Iron Ore During Hydrogen-Based High-Temperature Reduction.** *Metall. Mater. Trans. B*. (2025) **56B,** 5759-5772.

104) Jiang, Y., Liang, R., Wang, C., Liu, Y., Liu, C., Shakouri, M., King, G., Regier, T., Deng, Y.-P., Chen, Z. **Discretizing Cobalt Spin−Orbitals through Tuning the Crystal Symmetry for Zinc−Air Batteries.** *J. Am. Chem. Soc.* (2025) **147,** 25825-25833.

103) King, G., Rakhmatullin, A.; Simko, F. **The Role of Dynamic Polyhedral Rotations in the Phase Transitions of Rb_3AlF_6 and Cs_3AlF_6.** *Inorg Chem* (2025) **64,** 14661-14669.

102) Kuutti, K., Ghosalya, M. K., Porri, P., De Bellis, J. Jokimies, P., Singh, H., Wang, S., King, G., Fernandez-Catala, J., Schuth, F., Ainassaari, K., Huuhtanen, M., Huttula, M., Urpelainen, S., Rautiainen, S. **Mechanochemical synthesis of Pt/TiO2 for enhanced stability in dehydrogenation of methylcyclohexane.** *Catal. Sci. Technol.* (2025)**15,** 4143.

101) Jain, S., Zhou, Z., Horsley, E., Heath, C. J. S., Shakouri, M., Xiao, Q., Chen, N., Chen, W., King, G., Kim, Y.-J. **Effect of Ti-doping on the dimer transition in Lithium Ruthenate.** *Phys. Rev. Mater.* (2025) **9,** 063607.

100) Paige, M. F., Yeboah, A., Singh, S., Fleischauer, M., Malik, T., Pravica, M. G., Scott, R. W. J., Pensini, E., Marangoni, A. G., Leontowich, A. F. G., King, G., Appathurai, N., Rahemtulla, A., Boateng, E., Chen, A., Burns, N., Kycia, S., Moreno, B. **Chemistry applications at the Brockhouse sector hard X-ray beamlines at the Canadian Light Source.** *Can. J. Chem.* (2025) doi.org/10.1139/cjc-2024-0256.

99) Getahun, Y., Martinez, A. C., Rodriguez, M., Maurel, A., Lopez, D., Kim, E., King, G., Nair, H. S. **Electrochemical Performance of Layered Honeycomb $Na_2(Ni_{2-x}Co_x)TeO_6$ (x = 0, 0.10, 0.25) Oxides as Sodium-Ion Battery Cathodes.** *Inorg. Chem.* (2025) **64,** 8503-8513.

98) Rahemtulla, A., King, G., Gomez, A., Appathurai, N., Leontowich, A. F. G., Castle, R., Burns, N., Kim, C.-Y., Moreno, B., Kycia, S. **The High Energy diffraction beamline at the Canadian Light Source.** *J. Synch. Rad.* (2025) **32,** 750-756.

97) Kaur, K., King, G., Grosvenor, A. P. **Examining Order−Disorder Structural Transition of $Gd_2Zr_{2-x}Ce_xO_7$ Using Synchrotron Techniques.** *Inorg. Chem.* (2025) **64,** 5913-5922.

96) Rakhmatullin, A., King, G., Molokeev, M. S., Polovov, I. B., Maksimtsev, K. V., Suard, E., Bakirov, R., Simko, F., Bessada, C., Allix, M. **Crystal Structures of Three Polymorphs of Cs_3ScF_6 by Means of Solid-State NMR, X-ray, and Neutron Diffraction.** *Cryst. Growth Des.* (2025) **25,** 1217-1223.

95) Z. Xie, Liang, X., Kang, Z., Zou, Y., Wang, X., Wu, Y. A., King, G., Liu, Q., Huang, Y., Zhao, X., Chen, H., Zou, X. **High-Porosity, Layered Iridium Oxide as an Efficient, Durable Anode Catalyst for Water Splitting.** *CCS Chem.* (2025), **7,** 216-228.

94) You, I., Singh, B., Cui, M., Goward, G., Qian, L., Arthur, Z., King, G., Nazar, L. F. **A facile route to plastic inorganic electrolytes for all-solid state batteries based on molecular design.** *Energy Enviorn. Sci.* (2024) **18,** 478-491.

93) Li, W., Li, M., Wang, S., Chien, P.-H., Luo, J., Fu, J., Lin, X., King, G., Feng, R., Wang, J., Zhou, J., Li, R., Liu, J., Mo, Y., Sham, T.-K., Sun, X. **Superionic conducting vacancy-rich β-Li3N electrolyte for stable cycling of all-solid-state lithium metal batteries.** *Nature Nano.* (2024) doi.org/10.1038/s41565-024-01813-z.

92) Liu, M., Asgari, M., Bergmann, K., Shenassa, K., King, G., Leontowich, A. F. G., Fairen-Jimenez, D., Hudson, Z. M. **Coassembling Mesoporous Zeolitic Imidazolate Frameworks by Directed Reticular Chemistry.** *J. Am. Chem. Soc.* (2024) **146,** 31295-31306.

91) Bond, T., Gauthier, R., King, G., Dressler, R., Abraham, J. J., Dahn, J., R. **The Complex and Spatially Heterogeneous Nature of Degradation in Heavily Cycled Li-ion Cells.** *J. Electrochem. Soc.* (2024) **171,** 110514.

90) Vivod, M. B., Jaglicic Z., King, G., Hansen, T. C., Lozinsek, M., Dragomir, M. **Mechanochemical Synthesis and Magnetic Properties of the Mixed-Valent Binary Silver(I,II) Fluorides, $Ag^{I}_{2}Ag^{II}F_{4}$ and $Ag^{I}Ag^{II}F_{3}$.** *J. Am. Chem. Soc.* (2024) **146,** 30510-30517.

89) Sibav, L., Gosar, Z., Knaflic, T., Jaglicic, Z., King, G., Nojiri, H., Arcon, D., Dragomir, M. **Higher-Magnesium-Doping Effects on the Singlet Ground State of the Shastry−Sutherland $SrCu_2(BO_3)_2$.** *Inorg. Chem.* (2024) **63,** 43, 20335-20346.

88) Wang, X., Li, Z., Li, X., Gao, C., Pu, Y., Zhong, X., Qian, J., Zeng, M., Chu, X., Chen, Z., Redshaw, C., Zhou, H., Sun, C., Regier, T., King, G., Dynes, J. J., Zhang, B., Zhu, Y., Li, G., Peng, Y., Wang, N., Wu, Y. A. **Embedding Reverse Electron Transfer Between Stably Bare Cu Nanoparticles and Cation-Vacancy $CuWO_4$.** *Adv. Matter.* (2024) 2412570.

87) Lin, X., Zhang, S., Yang, M., Xiao, B., Zhao, Y., Luo, J., Fu, J., Wang, C., Li, X., Li, W., Yang, F., Duan, H., Liang, J., Fu, B., Abdolvand, H., Guo, J., King, G., Sun, X. **A family of dual-anion-based sodium superionic conductors for all-solid-state sodium-ion batteries.** (2024) *Nature Materials.* doi.org/10.1038/s41563-024-02011-x.

86) Aamlid, S. S., Mugiraneza, S., Gonzalez-Rivas, M. U., King, G., Hallas, A. M., Rottler, J. **Short-Range Order and Local Distortions in Entropy Stablized Oxides.** *Chem. Mater.* (2024) **36,** 19, 9636-9645.

85) Korenko, M., Simko, F., Allix, M., Rakhmatullin, A., Pitcher, M. J., King, G., **Determination of the Na_3AlF_6−Y_2O_3 Phase Diagram and Its Implications for Low-Temperature YAG/Nd:YAG Synthesis.** *Cryst. Growth Des.* (2024) **24,** 18, 7494-7503.

84) Qian, L., Singh, B., Yu, Z., Chen, N., King, G., Arthur, Z., Nazar, L. F., **Unlocking lithium ion conduction in lithium metal fluorides.** *Matter* (2024) **7,** 1-21.

83) Fu, H., Liu, H., Wang, X., Zhang, W., Zhang, H., Luo, Y., Deng, X., King, G., Chen, N., Wang, L., Wu, Y. A., **Reverse Hydrogen Spillover on Metal Oxides for Water-Promoting Catalytic Oxidation Reactions.** *Adv. Mater.* (2024) 2407534.

82) Chen, H., Lang, L., Shang, X., Dash, S. S., He, Y., King, G., Zou, Y., **Anisotropic co-deformation behavior of nanolamellar structures in additively manufactured eutectic high entropy alloys.** *Acta Materialia* (2024) **271,** 119885.

81) Badr, N. N., Long, F., Lucas, T., Luo, Y., Topping, M., Balogh, L. Beland, L. K., Yao, Z., King, G., Daymond, M. R. **On the stable/metastable nature of the γ-hydride phase in Zircaloy-2: Microstructural characterization by electron diffraction, electron energy-loss spectroscopy, and diffraction line profile analysis.** *J. Nuc. Mater.* (2024) **595,** 155058.

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79) Weil, M., Pramanik, P., Maltoni, P., Clulow, R., Rydh, A., Wildner, M., Blaha, P., King, G., Ivanov, S. A., Mathieu, R., Singh, H. **CoTeO4 – a wide-bandgap material adopting the dirutile structure type.** *Materials Advances* (2024) **5,** 3001-3013.

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77) Li, W., Quirk, J. A., Li, M., Xia, W., Morgan, L. M., Yin, W., Zheng, M., Gallington, L. C., Ren, Y., Zhu, N., King, G., Feng, R., Li, R., Dawson, J. A., Sham, T.-K., Sun, X. **Precise Tailoring of Lithium-Ion Transport for Ultralong-Cycling Dendrite-Free All-Solid-State Lithium Metal Batteries.** *Advanced Materials* (2023) 2302647.

76) Li, W., Li, M., Chien, P.-H., Wang, S., Yu, C., King, G., Hu, Y., H., Xiao, Q., Shakouri, M., Feng, R., Fu, B., Abdolvand, H., Fraser, A., Li, R., Huang, Y., Liu, J., Mo, Y., Sham, T.-K., Sun, X. **Lithium-compatible and air stable vacancy-rich $Li_9N_2Cl_3$ for high-areal capacity, long-cycling all-solid-state lithium metal batteries.** *Science Advances* (2023) eadh4626.

75) Bai, Y., Nasr, P., King, G., Reid, J. W., Leontowich, A. F. G., Corradini, M. G., Weiss, R. G., Auzanneau, F.-I., Rogers, M. A. **Halogen- and hydrogen-bonded self-assembled fibrillar networks of substituted 1,3:2,4-dibenzylidene-D-sorbitols (DBS).** *Nanoscale* (2023) **15,** 16933-16946. [selected for cover art]

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73) Deng, Y.-P., Jiang, Y., Liang, R., Chen, N., Chen, W., Yin, Z.-W., King, G., Su, d., Wang, X., Chen. Z. **Reconstructing 3d-Metal Electrocatalysts through Anionic Evolution in Zinc−Air Batteries.** (2023) *J. Am. Chem. Soc.* **145,** 20248-20260.

72) Laine, P., Valikangas, J., Kauppinen, T., Hu, T., Wang, S., King, G., Singh H., Tynjala, P., Lassi, U., **Synergistic effects of low-level magnesium and chromium doping on the electrochemical performance of $LiNiO_2$ cathodes.** *J. Solid State Electrochem.* (2024) **28**:85-101.

71) Fu, J., Wang, S., Liang, J., Alahakoon, S. H., Wu, D., Luo, J., Duan, H., Zhang, S., Zhao, F., Li, W., Li, M., Hao, X., Li, X., Chen, J., Chen, N., King, G., Chang, L-Y., Li, Ruying, Huang, Y., Gu, M., Sham, T. K., Mo, Y., Sun, X., **Superionic Conducting Halide Frameworks Enabled by Interface-Bonded Halides.** (2023) *J. Am. Chem. Soc.* **145,** 2183-2194.

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15) King, G., Ricciardo R. A., Soliz, J. R., Woodward, P. M., Llobet A. **Linking Local Structure and Properties in Perovskites Containing Equal Concentrations of Manganese and Ruthenium.** *Phys. Rev. B.* (2011) 83, 134123.

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13) Huang, Z. G., King, G., Chen, X. N., Hoy, J., Yisgedu, T., Lingam, H. K., Shore S. G., Woodward, P. M., Zhao, J. C. **A Simple and Efficient Way to Synthesize Unsolvated Sodium Octahydrotriborate.** *Inorg. Chem.* (2010) 49, 8185-8187.

12) King, G., Woodward, P. M. **Cation Ordering in Perovskites.** *J. Mater. Chem.* (2010) 20, 5785-5796.

11) King, G., Abakumov, A. M., Hadermann, J., Alekseeva, A. M., Rozova, M. G., Perkisas, T., Woodward, P. M., Van Tendeloo, G., Antipov, E. V. **Crystal Structure and Phase Transitions in Sr_3WO_6.** *Inorg. Chem*. (2010) 49, 6058-6065.

10) King, G., Garcia-Martin, S. Woodward, P. M., **Octahedral tilt twinning and compositional modulation in $NaLaMgWO_6$.** *Acta Cryst. B.* (2009) 65, 676-683.

9) Abakumov, A. M., King, G., Laurinavichute, V. K., Rozova, M. G., Woodward, P. M., Antipov, A. V., **Crystal Structure of α-K_3AlF_6: Elpasolites and Double Perovskites with Broken Corner-Sharing Connectivity of the Octahedral Framework.** *Inorg. Chem.* (2009) 48, 9336-9344.

8) King, G., Wills, A. S., Woodward, P. M. **Magnetic structures of Na*L*MnWO$_6$ perovskites (*L* = La, Nd, Tb).** *Phys. Rev. B.* (2009) 79, 224428.

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6) Garcia-Martin, S., Urones-Garrote E., Knapp, M. C., King, G., Woodward P. M. **Transmission Electron Microscopy Studies of NaLaMgWO$_6$: Spontaneous Formation of Compositionally Modulated Stripes.** *J. Amer. Chem. Soc.* (2008) 130, 15028-37.

5) Spirig, J. V., Routbort, J. L., Singh, D., King, G., Woodward, P. M., Dutta, P. K. **Joining of highly aluminum-doped lanthanum strontium manganese oxide with tetragonal zirconia by plastic deformation.** *Solid State Ionics* (2008) 179, 550-557.

4) King, G., Thimmaiah, S., Dwivedi, A., Woodward, P. M. **Synthesis and Characterization of New *AA′B*WO$_6$ Perovskites Exhibiting Simultaneous Ordering of *A*-Site and *B*-Site Cations.** *Chem. Mater.* (2007) 19, 6451-6458.

3) Baddeley, C., Yan, Z., King, G., Woodward, P. M., Badjic, Y. D. **Structure-Function Studies of Modular Aromatics That Form Molecular Organogels.** *J. Org. Chem*. (2007) 72, 7270-7278.

2) Kovalevsky, A.Y., King, G., Bagley, K. A., Coppens, P. **Photoinduced Oxygen Transfer and Double-Linkage Isomerism in a *cis*-(NO)(NO$_2$) Transition-Metal Complex by Photocrystallography, FT-IR Spectroscopy and DFT Calculations.** *Chem. Eur. J.* (2005) 11, 7254-7264.

1) King, G., Gembicky, M., Coppens, P. **Two novel bis(2,9-dimethyl-1,10-phenanthroline)copper(I) complexes:[Cu(dmp)$_2$]$_2$(PF$_6$)$_2$·0.5(bpmh)·CH$_3$CN and [Cu(dmp)$_2$][N(CN)$_2$].** *Acta Cryst*. (2005). C61. m329-332.

Conference Presentations and Organizing Activity

King, G., Rakhmatullin, A., **Dynamic Octahedral Rotations, Phase Transitions, Local and Crystal Structures of Perovskites with Non-Cooperative Octahedral Tilting.** *Invited Talk* given at the IUCr Conference, Calgary, AB, Aug 17, 2026. Also organized and chaired a session entitled **Data quality and error analysis for diffuse scattering.**

King, G., Karki, S., Ramezanipour, F., **Local Structures of Electrocatalytically Active *A*$_3$Fe$_3$O$_8$ Oxygen Deficient Perovskites.** North American Solid State Chemistry Conference, Calgary, AB, Aug 2-4, 2023.

King, G., **Diffraction and Pair Distribution Function using High Energy X-rays.** *Invited Talk* given at the Canadian Chemistry Conference, Calgary, AB, June 13-17, 2022.

King, G., Rakhmatullin, A., Allix, M., **Structures and Dynamics of Halide Double Perovskites with Non-Cooperative Octahedral Tilting.** North American Solid State Chemistry Conference, virtual, July 28-21, 2021.

King, G., Gomez, M., **Using Total Scattering to Reveal the Structures and Relationships of Arsenic Containing Minerals.** North American Solid State Chemistry Conference, Golden, CO, July 31st-Aug 22nd, 2019.

King, G., Moreno, B., Leontowich, A., Appathurai, N., Muir, D., Kycia, S., **New Opportunities for Materials Characterization at the Canadian Light Source.** Solid State Chemistry Gordon Research Conference, New London, NH, July 22-27, 2018.

King, G., Thompson, C. M., Luo, K., Greedan, J. E., Hayward, M. A., Avdeev, M., Qasim, I., Zhou, Q., Kennedy, B. J., **Identifying the Local Building Blocks in Disordered Oxygen Deficient Perovskites.** Canadian Chemistry Conference, Edmonton, AB, May 27-31, 2018.

Organized and chaired a session entitled **Local Structure and Complex Materials** at the 2015 American Crystallographic Association Annual Meeting, Philadelphia, PA, July 25-29.

King, G., Avila-Brande, D., Urones-Garrote, E., Llobet, A., Garcia-Martin, S., **Discovery of Tripolaron Formation in $TbBaMn_2O_{5.75}$.** American Crystallographic Association Annual Meeting, Albuquerque, NM, May 24-28, 2014. Also organized and chaired a session entitled **Innovative Ways of Finding Atoms from Powder Diffraction Data.**

King, G., Thomas, K. J., Llobet, A., **Local Structures of Ionic Conducting $Sr_2MSbO_{5.5}$ (*M* = Ca, Sr, Ba) Double Perovskites**. North American Solid State Chemistry Conference, Corvallis, Oregon, June 23-26, 2013.

King, G., Garcia-Martin, S., Urones-Garrote, E., Nenert, G., Woodward, P. M. **Complex Superstructures Resulting from Compositional Modulation and Octahedral Tilt Twinning in $AA'BB'O_6$ Doubly Cation Ordered Perovskites.** *Invited talk* given at IMAPS/ACerS 9th International Conference and Exhibition on Ceramic Interconnect and Ceramic Microsystems Technologies, Orlando, Florida, April 23-25, 2013.

King, G., Thomas, K. J., Llobet, A., **When the Average Structure is Insufficient as a Starting Model for Reverse Monte Carlo Modeling of Pair Distribution Function Data: The Case of $Sr_2MSbO_{5.5}$ (*M* = Ca, Sr, Ba) Double Perovskites.** Workshop on Advanced Simulation Techniques for Total Scattering Data, Santa Fe, New Mexico, Oct. 16-19, 2012.

King, G., Llobet, A., Ricciardo, R., Soliz, J., Woodward, P. M., Ramezanipour, F., Greedan, J., **Reverse Monte Carlo Modeling of Pair Distribution Function Data as a Tool for Separating the Coordination Environments of Multiple Atoms Disordered Over a Single Site.** American Physical Society March Meeting, Boston, Massachusetts, Feb 27 - March 2, 2012.

King, G., Abakumov, A. M., Woodward. P. M., Antipov, E. V., Llobet, A. **Non-Cooperative Octahedral Tilting in the Double Perovskites Sr_3WO_6 and K_3AlF_6.** North American Solid State Chemistry Conference, Hamilton, Ontario, Canada, June 1-4, 2011.

King, G., Abakumov, A. M., Woodward. P. M., Llobet, A. **Perovskites with Broken Corner Sharing Connectivity of the Octahedral Framework.** Materials Research Society Fall Meeting, Boston, Massachusetts, Nov. 29-Dec. 3, 2010.

King, G., Wills, A. S., Woodward, P. M. **Magnetic Structures of $NaLnMnWO_6$ Perovskites (*Ln* = La, Nd, Tb).** American Crystallographic Association Annual Meeting, Toronto, Ontario, Canada, July 24-30, 2009.

King, G., Wayman, L. M., Garcia-Martin, S., Wills, A. S., Woodward, P. M., **Structural and Magnetic Properties of Perovskites with Ordering of Both the *A*-site and *B*-site Cations.** North American Solid State Chemistry Conference, Columbus, OH, June 17-20, 2009.

King, G., Wayman, L. M., Wills, A. S., Woodward, P. M., **Structural and Magnetic Properties of Perovskites with Ordering of Both the *A*-Site and *B*-Site Cations.** 41st Central Regional Meeting of the American Chemical Society, Cleveland, OH, May 20-23, 2009.

King, G., Wayman, L., Wills, A. S., Woodward, P. M., **Complex Structural and Magnetic Ordering in *AA'BB'*O_6 Perovskites.** Materials Research Society Fall Meeting, Boston, Massachusetts, Dec. 1-5, 2008.

King, G., Wills, A. W., Woodward, P.M. **Magnetic Structures of Na*Ln*$MnWO_6$ Perovskites with Ordering of the *A*-Site and *B*-Site Cations.** 2nd Workshop on Novel Electronic Materials, Lexington, Kentucky, May 15-17, 2008.

King, G., Woodward, P. M. **New Examples of *A*-site Cation Ordering in *AA'M*WO_6 Perovskites.** North American Solid State Chemistry Conference, College Station, Texas, May 17-19, 2007.

Workshops and Extended Research Visits

Visiting Researcher for one month at the CEMHTI-CNRS laboratory in Orleans France	2023
HERCULES one month course for users of large experimental facilities	2012
International Center for Materials Research (ICMR) student travel grant to Universidad Complutense de Madrid for collaborative research	2008
NSF Materials World Network funded travel to work in the crystal chemistry group at Moscow State University in Russia	2008
Workshop on Representational Analysis of Complex Magnetic Structures (at NIST)	2007
NSF funded undergraduate fellowship to travel to the University of Bratislava, Slovakia for collaborative research	2004

Committee Memberships and Reviewing Activity

Member of the International Center for Diffraction Data (ICDD)	2026-present
Reviewer of beamtime proposals for Neutrons Canada	2023-present
Member of the Canadian Institute for Neutron Scattering Executive Committee	2022-present
Member of the Oak Ridge National Laboratory Neutron Scattering Science Proposal Review Committee	2014-present
Instructor for the 2023 NASSC Powder Diffraction Workshop	2023
Speaker and organizer for the Canadian Light Source Powder Diffraction Workshop	2022-2025
Served on an NSF Facilities Grant Review Panel	2022
Speaker and organizer for 13th Canadian Powder Diffraction Workshop	2020
Served as an opponent for a doctoral examination for Aalto University	2020

Reviewer for 11-BM rapid access proposals at the Advanced Photon Source 2018-2019

Co-chair of the organizing committee and speaker/instructor for the

11^{th} LANSCE Neutron School 2014-2015

Served as an external examiner for a doctoral thesis for the University of Wollongong 2015

Served as a reviewer of over 300 articles for the following 35 journals: Nature Chemistry, Nature Materials, Physical Review Letters, Physical Review B, Chemistry of Materials, Journal of Materials Chemistry, Journal of Materials Chemistry A, Dalton Transactions (>100 reviews), Inorganic Chemistry, Journal of Solid State Chemistry (>125 reviews), Physical Chemistry Chemical Physics, ChemComm, European Journal of Inorganic Chemistry, Materials Research Bulletin, Solid State Communications, Physica Status Solidi, Physics and Chemistry of Minerals, Inorganica Chimica Acta, CrystEngComm, Journal of the American Ceramic Society, Journal of Applied Crystallography, Journal of Alloys and Compounds, Ionics, Materials Horizons, New Journal of Chemistry, Journal of Magnetism and Magnetic Materials, Acta Materialia, Mineralogical Magazine, International Journal of Ceramic Science and Engineering, Research SPJ, Nanomaterials, Materials Science and Engineering B, ACS Omega, J. Mater Chem. C, ACS Nano.