

## Sean Parkin, Ph.D.

Director, X-Ray Laboratory  
Department of Chemistry  
CP-313, Chemistry-Physics Building  
University of Kentucky  
Lexington, KY, 40506-0055  
(859) 323 – 8984  
(859) 323 – 9985 (fax)  
[s.parkin@uky.edu](mailto:s.parkin@uky.edu)

### PERSONAL

British citizen, permanent resident alien of the US.

### EDUCATION

**Ph. D. (Physical Chemistry)** University of California (Davis), 1993  
**M. Sc. (Physical Chemistry)** University of British Columbia (Vancouver), 1989  
**B. Sc. (Chemistry, hons.)** University of Kent (Canterbury), 1987

**O level** (Mathematics, Physics, Chemistry, Biology, Geography, French, English Language, English Literature, History, General Studies)  
**A level** (Mathematics, Physics, Chemistry, General Studies)  
**S level** (Chemistry)

### AWARDS

Imperial Chemical Industries Undergraduate Scholarship (3 years)  
University of California Regents Fellowship (2 years)  
Clorox Graduate Research Award (University of California)

### PROFESSIONAL EXPERIENCE

Apr. 2014 – **Assoc. Prof. of Chemistry (adj. ser.)**  
Department of Chemistry, UK.

Jan. 2006 – **Asst. Prof. of Chemistry (adj. ser.)**  
Department of Chemistry, UK.

- Feb. 2000 – **Director, X-Ray Crystallography**  
Department of Chemistry,  
University of Kentucky (UK)  
Lexington, KY, 40506-0055
- Sept. 1997 – Feb. 2000 **Manager, X-Ray Facility**  
Department of Biochemistry  
Duke University Medical Center  
Durham, NC, 27710
- Jan. 1996 – Aug. 1997 **Senior Scientist**  
Biology and Biotechnology Research Program  
Lawrence Livermore National Laboratory  
Livermore, CA, 94550
- Jan. 1994 – Dec. 1995 **Post Doctoral Fellow**  
Biology and Biotechnology Research Program  
Lawrence Livermore National Laboratory  
Livermore, CA, 94550

## **PUBLICATIONS**

Author/co-author of over 400 scientific papers.  
Book chapter: International Tables for Crystallography, vol. F (2<sup>nd</sup> ed.)  
Total citations: > 11900 (Web of Science), > 14800 (Google Scholar)  
H-index: 51 (Web of Science), 56 (Google Scholar)

## **PRESENTATIONS**

Numerous lectures/seminars (national and international)  
Main author of numerous poster presentations (national and international)  
Co-author on too many presentations to track

## **PROFESSIONAL SOCIETY MEMBERSHIPS**

American Crystallographic Association (ACA)  
American Physical Society (APS)  
Pittsburgh Diffraction Society (PDS)  
Materials Research Society (MRS)

## GRANTS

*“Acquisition of a hybrid small/macro-molecular diffractometer system”*

PI: Sean Parkin, co-PIs John Anthony, David Atwood, Carol Brock, Anne-Frances Miller. (Dept. of Chemistry, U. of Kentucky.) NSF-MRI CHE-0319176.

Total: \$659,059 (70% NSF-MRI, 30% UK Match).

*“Novel Materials and Their Applications in Epitaxial Thin Films and Device Structures: Formation of a Center for Advanced Materials”*

PI: John Connolly, coPIs G. Cao, J. W. Brill, W. P. Crummett, L. E. De Long, W. R. Grise, B. J. Hinds, A. Lahamer, K.-W. Ng, S. Parkin.

NSF KY EPSCoR, 09/01/08 – 08/31/13.

Total: \$4,687,649 (69% NSF, 20% KY, 11% UK).

*“MRI: Acquisition of a Single-Crystal Diffractometer for Chemistry and Materials Research”*

PI: Sean Parkin, co-PIs John Anthony, Phoebe Glazer, Susan Odom, Oleg Tsodikov. NSF-MRI CHE-1625732.

Total: \$383,133 (70% NSF-MRI, 30% UK Match).

## TEACHING

Chemical Crystallography – CHE640 (previously CHE580 and CHE540).

Introduction to the theory and practice of small-molecule X-ray diffraction.

Fall 2001–2004; Spring 2006 – 2011; Fall 2013 – 2015.

Physical Chemistry Laboratory – CHE441G, Fall 2007, 2008

Informal: Practical crystallography training for graduate students, post-doctoral scholars and Faculty on an *ad hoc* basis (ongoing since about 1991)

## PATENTS

Anthony, John E., Eaton, David L., Parkin, Sean.

"Substituted pentacenes and electronic devices made with substituted pentacenes."

U.S. (2004) Patent no. 6,690,029.

Anthony, John E., Payne, Marcia M., Odom, Susan A., Parkin, Sean R.

"Silylethynylated heteroacenes and electronic devices made therewith."

U.S. (2008) Patent no. 7,385,221.

Ladipo, F., Eaves, R., Zazybin, A, Parkin, S.

"Precatalysts useful in polyolefin polymerization reactions."

U.S. (2011) Patent no. 7,851,570.

## **SERVICE**

Frequent collaborator with research groups at UK (Chemistry, Pharmacy, Physics and Toxicology) as well as at other universities (Stanford, Princeton, Brandeis, UMass Amherst, UT Knoxville, Miami Ohio, Scripps, U. of Iowa, U. of Louisville, EKV, WKU, UCSB, Ohio State, MS State, UT San Antonio, U of S. Arkansas, CSofM) and industry.

Center for Advanced Materials, University of Kentucky.

Editor, MRS Online Proceedings, (2015) vol. 1799 – Symposium MM (Apr. 2015).

Editor, MRS Online Proceedings, (2013) vol. 1501 – Symposium P (Nov. 2012).

Co-Editor, Acta Crystallographica E (since 2007).

Co-Editor, IUCr Data (since 2015).

Commission on Journals of the International Union of Crystallography.

REU program in Chemistry at UK. Direction of research efforts, construction and maintenance of an REU website (2006 – 2008).

Graduate Faculty in Chemistry, auxiliary member (2000 – 2005).

Graduate Faculty in Chemistry (since July, 2005).

Chair, Website Committee, Dept. of Chemistry, UK (2016 – present).

Webmaster (*ad hoc*), Dept. of Chemistry, UK (since Jan. 2004).

Webmaster, X-Ray Facility, UK (2000 – present).

Ph.D. Thesis committee for Xiang Hao (2005).

Department of Chemistry, University of Kentucky.

External Examiner, Ph.D. Thesis committee for Yuzhao Zhao (2006).

Graduate Group in Toxicology, University of Kentucky.

Ph.D. Thesis committee for Maxime Siegler (2007).

Department of Chemistry, University of Kentucky.

Ph.D. Thesis Committee for Vinobalan Durairaj (2008).

Department of Physics and Astronomy, University of Kentucky.

External Examiner, Ph.D. Thesis committee for Amanda Ensminger (2011).

Department of Biology, University of Kentucky.

Ph.D. Thesis Committee for Tongfei Qi (2012).  
Department of Physics and Astronomy, University of Kentucky.

External Examiner, Ph.D. Thesis committee for Nidhi Tibrewal (2013).  
College of Pharmacy, University of Kentucky.

Ph.D. Thesis Committee for Kamal Butrouna (2014).  
Department of Physics and Astronomy, University of Kentucky.

Ph.D. Thesis Committee for Jasminka Terzic (2017).  
Department of Physics and Astronomy, University of Kentucky.

Referee for scientific journals, including Acta Crystallographica sections B, C, D,  
Journal of Applied Crystallography, Inorganic Chemistry, Crystal Growth and  
Design, Journal of Chemical Crystallography, Journal of Materials Chemistry,  
Journal of Coordination Chemistry, Synthetic Metals.

Stanford Synchrotron Radiation Laboratory 22nd Annual Users Meeting (1995)  
Demonstration and instruction in low-temperature methods in  
biocrystallography.  
Workshop on Techniques in Macromolecular Crystallography: Cryocooling and  
Data Reduction/Analysis.  
Stanford Synchrotron Radiation Laboratory, Stanford University, Palo Alto, CA.  
94309, USA.

RapiData 2000 – 2006 (and 'DataCol' 1999).  
Demonstration and instruction in low-temperature methods in  
biocrystallography.  
Rapid Data Collection and Structure Solving at the NSLS: A Practical Course in  
Macromolecular X-Ray Diffraction Measurement.  
NSLS, BNL, Upton, NY. 11973, USA.

Science Fair Judge – Various locations and dates, including Central Kentucky  
Regional Science and Engineering Fair, Lexington, KY (since 2002).