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### Short Bio

Uwe Bergmann got his PhD in Physics from Stony Brook University and is the Martin L. Perl Professor in Ultrafast X-ray Science in the Department of Physics at the University of Wisconsin-Madison. His research activities focus on the development and application of novel synchrotron and X-ray laser techniques. His scientific interests include studies of the structure of water and aqueous solution, active centers in metalloproteins with focus on photosynthetic splitting of water, hydrocarbons and fossil fuels, functional 2D materials and magnetic membranes, and imaging of ancient materials and fossils. Bergmann has done his graduate research at the National Synchrotron Light Source and since worked at the European Synchrotron Radiation Facility, the Lawrence Berkeley National Laboratory, the Stanford Synchrotron Radiation Lightsource, the Linac Coherent Light Source, and at the Stanford PULSE Institute at SLAC National Accelerator Laboratory.

Google Scholar: <http://scholar.google.com/citations?user=1ksjPSoAAAAJ&hl=en>

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AIP Niels Bohr Library transcript: <https://repository.aip.org/node/129804>

### Education

|       |              |         |  |
|-------|--------------|---------|--|
| 1994: | Ph.D.        | Physics | State University of New York at Stony Brook, NY  |
| 1990: | 'Diplom'     | Physics | University of Hamburg, Germany                   |
| 1986  | 'Pre-Diplom' | Physics | Karlsruhe Institute of Technology (KIT), Germany |

### Professional Experience

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|-----------|--|
| 2023-     | Co-Lead, IRG-2 of the Wisconsin Materials Research Science and Engineering Center (MRSEC)                                  |
| 2022-     | Affiliate Faculty, Department of Chemistry, University of Wisconsin-Madison  |
| 2021-     | Visiting Professor, SLAC National Accelerator Laboratory, Stanford, CA   |
| 2021-     | Affiliate Faculty, Department of Materials Science and Engineering, University of Wisconsin-Madison, Madison, WI           |
| 2020-     | Professor, Department of Physics, University of Wisconsin-Madison, Madison, WI   |
| 2016-2017 | Visiting Professor, European Research Platform on Ancient Materials (IPANEMA), Foundation of Heritage Science, FSP, France |
| 2016-2020 | Associate Director, DOE Center 'Materials Genome Innovation for Computational Software'                                    |
| 2015-2020 | Principal Investigator, Stanford PULSE Institute, Stanford, CA   |
| 2015-2020 | Distinguished Staff Scientist, SLAC, Stanford, CA  |
| 2014-     | Guest Scientist, Molecular Biophysics & Integrated Bio Division, LBNL, Berkeley, CA  |
| 2013-2014 | Director (Interim), Linac Coherent Light Source (LCLS), SLAC, Stanford, CA   |
| 2013-2014 | Stanford Leadership Academy, Class of 2014   |
| 2010-2012 | Consulting with Kirkland & Ellis LLP, New York, NY   |
| 2010-2011 | Leadership@Stanford, Class of 2011   |
| 2009-2013 | Deputy Director, Linac Coherent Light Source (LCLS), SLAC, Stanford, CA  |
| 2009      | Head of Chemical & Materials Science & User Support Department, SSRL, SLAC, Stanford, CA                                   |
| 2009-2012 | Member of the California Executive Committee of the American Physical Society  |
| 2007-2015 | Senior Staff Scientist, SLAC, Stanford, CA   |
| 2003-2007 | Staff Scientist, Stanford Synchrotron Radiation Lightsource (SSRL), SLAC, Stanford, CA                                     |
| 2001-2003 | Chair, Stanford Synchrotron Radiation Laboratory Users' Organization Executive Committee                                   |
| 2000-2003 | Assistant Researcher, Department of Applied Science, University of California, Davis                                       |
| 1999-2003 | Scientist, Lawrence Berkeley National Laboratory, Berkeley, CA   |
| 1996-1999 | Postdoctoral Fellow, Lawrence Berkeley National Laboratory, Berkeley, CA   |
| 1994-1996 | Postdoc, European Synchrotron Radiation Facility in Grenoble, France   |

## Research Interests

Development and application of novel synchrotron, X-ray free electron laser and ultrafast electron techniques including:

- X-ray emission spectroscopy
- Resonant and non-resonant inelastic X-ray scattering
- X-ray Raman scattering
- X-ray fluorescence imaging
- Combined X-ray emission and diffraction
- Stimulated X-ray emission spectroscopy
- Nuclear resonant scattering
- Ultrafast electron diffraction

Applications of X-ray spectroscopy and scattering to:

- Metalloproteins in bio-catalysis
- 3d transition metal compounds
- Water and aqueous solutions
- Hydrocarbons and fossil fuels
- 2d layered materials

Applications for X-ray fluorescence imaging to:

- Ancient parchment writings including the *Archimedes Palimpsest*
- Medical studies of brain tissue
- Fossils including the *Archaeopteryx* and *Confuciusornis Sanctus*

Application of ultrafast electron diffraction to:

- 2d layered and functional materials

## Synergistic Activities, Awards and Honors

Chair Photon Science Advisory Committee, Paul Scherrer Institute (PSI), Villigen, Switzerland, 2025 –  
Organizer of **Claudio90 – Perspectives, Applications, and the Future of X-ray Lasers** A Symposium to Celebrate Claudio Pellegrini's 90<sup>th</sup> Birthday, SLAC National Accelerator Laboratory, May 9, 2025  
Chair Proposal Review Panel on Cultural Heritage research, Advanced Photon Source, Argonne Natl. Lab, 2024 –  
Member User Executive Committee of LCLS, 2022 –  
Proposal Review Panel, Methods & Instrumentation Chair at LCLS, X-ray free electron laser facility, USA, 2021 –  
Proposal Review Panel member at SACLA X-ray free electron laser facility, Japan, 2021 –  
Proposal Review Panel member at Cornell High Energy Synchrotron Source, 2019 –  
Moossa J. Arman Award for Innovation in Physics, UCLA College of Physics & Astronomy, April 16, 2018  
Member of the California Executive Committee of the American Physical Society, 2009 – 2012  
Proposal Review Panel member at National Synchrotron Light Source, 2005 – 2007  
SLAC Employee Recognition Award, 2004  
Chair/Member Stanford Synchrotron Radiation Lightsource Users' Organization Executive Committee, 2001-2003  
Co-Founding of the SLAC Public Lecture Series, see <http://www2.slac.stanford.edu/lectures/>  
Co-Founding of Berkeley Spectroscopy Club, a lecture series that ran for two years until my departure from LBNL, see <http://spectroscopy.lbl.gov/>

## Advisors

|              |   |
|--------------|---|
| Postdoctoral | Francesco Sette, European Synchrotron Radiation Facility<br>Stephen P. Cramer, UC Davis and Lawrence Berkeley National Laboratory |
| Ph.D.        | Peter Stephens, Stony Brook University, Jerry Hastings, NSLS  |
| Diplom       | Erich Gerdau, Hamburg University  |

## Students Advised at SLAC

Undergraduate students (SULI and LCLS programs): Kevin Reynolds, Isabella Griffin, Manisha Turner, Niclas Zeller, Luis Matheis, José Enrique Corado, Diego Arceo-Pegrino, Julieth Otero Rodriguez  
High school students: Jessica Lee, Bryce Cronkite-Ratcliff,

Graduate Intern: Katalina Kimball-Linares

#### **UW-Madison Graduate Students**

Zain Abhari (2021—  
Roberta Candela (2021—  
Minhal Gardezi (2022—  
Sophia Vogelsang (2022—  
Caleb Robinson (2023)  
Mace Bishop (2024)  
Aakankshya Mishra (2025—

#### **UW-Madison Undergraduate Student**

Noah Welke (2021—2023)  
Nikhilesh Venkatasubramanian (2021—2022)  
Maxwell Hanson (2021)  
Jake Murawski (2022—2024)  
Muneeza Munawar (2022—2024)  
Mikaela Brown (2024—2025)  
Zoe Ramstack (2025—  
Yuchen Chen (2025)  
Alice Israngkun Na Ayuthia (2025—

#### **Stanford Undergraduate Students Advised**

Hashim Ali AlAwami, Asli Kimya, Ines A Lizaur, Michael P McKenna (2012—2013)  
Charles C Cox, Darren Hau, Michael A Lublin, Delaney M Sztraicher, Justine Y Zhang (2011—2012)

#### **Mentees**

Miriam Diamond, Postdoc, SLAC Mentorship program (2017—2018)

#### **Postdocs and Research Associates Advised**

Varun Mapara (2023—  
Erzsi Szilágyi (2023—2024), supervision shared with Junko Yano, LBNL  
Thomas Linker (2023—2025); supervision shared with Matthias Kling, SLAC  
Rafaella Gergiou (2023—  
Ryan Ash (2021- 2023)  
Andrew Attar (2018—2020), supervision shared with Mike Minitti, SLAC  
Alexander Britz (2018—2020), supervision shared with Sébastien Boutet, SLAC  
Yu Zhang (2017—2019)  
Nicholas Edwards (2016—2017), supervision with Sam Webb, SLAC and Roy Wogelius, U Manchester  
Thomas Fransson (2016—2017), supervision shared with Junko Yano, LBNL  
Ming-Fu Lin (2016—2018), supervision shared with David Fritz, SLAC  
Clemens Weninger (2016—2017), supervision shared with David Fritz, SLAC  
Thomas Kroll (2013—2015), supervision shared with Junko Yano, LBNL  
Jan Florian Kern (2010—2012), supervision shared with Vittal Yachandra, LBNL  
Roberto Alonso-Mori (2010—2012)  
Dimosthenis Sokaras (2010—2013)  
Xuena Zhang (2009—2010)

#### **List of Publications (October 2025)**

236. Linker, TM; Halavanau, A; Kroll, T; Benediktovitch, A; Zhang, Y; Michine, Y; Chuchurka, S; Abhari, Z; Ronchetti, D; Fransson, T; Weninger, C; Fuller, FD; Aquila, A; Alonso-Mori, R; Boutet, S; Guetg, MW; Marinelli, A; Lutman, AA; Yabashi, M; Inoue, I; Osaka, T; Yamada, J; Inubushi, Y; Yamaguchi, G; Hara, T; Babu, G; Salpekar, D; Sayed, FN; Ajayan, PM; Kern, J; Yano, J; Yachandra, VK; Kling, MF; Pellegrini, C;

- Yoneda, H; Rohringer, N; Uwe Bergmann, U; **Attosecond inner-shell lasing at ångström wavelengths**, *Nature* **642**, 934–940 (2025), <https://doi.org/10.1038/s41586-025-09105-9>
235. Lazemi, M; Mohammad, FJ; Park, SH; Katoch, A; Blankesteyn, HJFA; Botello-Méndez, AR; van der Minne, E; Birkhölzer, YA; van den Bosch, ICG; Kiens, EM; Baeumer, C; Koster, G; Kwon, S; Bergmann, U; de Groot FMF; **Ultrafast Light-Driven Electronic and Structural Changes in LaFeO<sub>3</sub> Perovskites Probed by Femtosecond X-Ray Absorption Spectroscopy**, *Adv. Mater.* 2502932 (2025), <https://doi.org/10.1002/adma.202502932>
234. Bogacz, I; Szilagy, E; Makita, H; Simon, PS; Zhang, M; Doyle, MD; Chatterjee, K; Kretschmar, M; Chernev, P; Croy, N; Cheah, M-H; Dasgupta, M; Nangca, I; Fransson, Th; Bhowmick, A; Brewster, AS; Sauter, NK; Owada, S; Tono, K; Zerdane, S; Oggenfuss, A; Babich, D; Sander, M; Mankowsky, R; Lemke, HT; Gee, LB; Sato, T; Kroll, Th; Messinger, J; Alonso-Mori, R; Bergmann, U; Sokaras, D; Yachandra, VK; Jan Kern, J; Yano, J; **X-ray Absorption Spectroscopy of Dilute Metalloenzymes at X-ray Free-Electron Lasers in a Shot-by-Shot Mode**, *J. Phys. Chem. Lett.* **16**, 3778-3787 (2025), <https://doi.org/10.1021/acs.jpcllett.5c00399>
233. Linker, TM; Dagar, R; Feinberg, A; Sahel-Schackis, S; Nomura, K-I; Nakano, A; Shimojo, F; Vashishta, P; Bergmann, U; Kling, MF; Summers, AM; **Catalysis in Extreme Field Environments: A Case Study of Strongly Ionized SiO<sub>2</sub> Nanoparticle Surfaces**, *J. Am. Chem. Soc.* **146**, 27563-27570 (2024), <https://doi.org/10.1021/jacs.4c08550>
232. Bergmann, U; **Stimulated X-ray Emission Spectroscopy**, *Photosynthesis Research* **162**, 371-384 (2024) <https://doi.org/10.1007/s11120-024-01080-y>
231. Bhowmick, A; Simon, PS; Bogacz, I; Hussein, R; Zhang, M; Makita, H; Ibrahim, M; Chatterjee, R; Doyle, MD; Cheah, MH; Chernev, P; Fuller, FD; Fransson, T; Alonso-Mori, R; Brewster, AS; Sauter, NK; Bergmann, U; Dobbek, H; Zouni, A; Messinger, J; Kern, J; Yachandra, VK; Yano, J; **Going around the Kok cycle of the water oxidation reaction with femtosecond X-ray crystallography**, *IUCrJ*, **10**, 642-655 (2023) ISSN: 2052-2525, <https://doi.org/10.1107/S2052252523008928>
230. Welke, N; Majernik, N; Ash, R; Moro, A; Agustsson, R; Manwani, P; Li, K; Sakdinawat, A; Aquila, A; Benediktovitch, A; Halavanau, A; Rosenzweig, J; Bergmann, U; C Pellegrini, C; **Development of spinning-disk solid sample delivery system for high-repetition rate x-ray free electron laser experiments**, *Rev Sci Instrum* **94**, 103005 (2023) <https://doi.org/10.1063/5.0168125>
229. Ash, R; Abhari, Z; Candela, R; Welke, N; Murawski, J; Gardezi, SM; Venkatasubramanian, N; Munawar, M; Siewert, F; Sokolov, A; LaDuca, Z; Kawasaki, J; Bergmann, U; **X-FAST: A versatile, high-throughput, and user-friendly XUV femtosecond absorption spectroscopy tabletop instrument**, *Rev Sci Instrum* **94**, 073004 (2023) <https://doi.org/10.1063/5.0146137>
228. Weakly, RB; Liekhus-Schmaltz, CE; Poulter, BI; Biasin, E; Alonso-Mori, R; Aquila, A; Boutet, S; Fuller, FD; Ho, PJ; Kroll, T; Loe, CM; Lutman, A; Zhu, D; Bergmann, U; Schoenlein, RW; Govind, N; Khalil, M; **Revealing core-valence interactions in solution with femtosecond X-ray pump X-ray probe spectroscopy** *Nature Communications* **14**, 3384 (2023) <https://doi.org/10.1038/s41467-023-39165-2>
227. Wright, JC; Kohler, DD; U Bergmann, U; **X-ray/Extreme Ultraviolet Floquet State Multidimensional Spectroscopy, an Analogue of Multiple Quantum Nuclear Magnetic Resonance**, *The Journal of Physical Chemistry Letters* **14**, 4908-4913 (2023) <https://doi.org/10.1021/acs.jpcllett.3c00778>
226. Bhowmick, A; Hussein, R; Bogacz, I; Simon, PS; Ibrahim, M; Chatterjee, R; Doyle, MD; Cheah, MH; Fransson, T; Chernev, P; Kim, I-S; Makita, H; Dasgupta, M; Kaminsky, CJ; Zhang, M; Gärtke, J; Haupt, S; Nangca, II; Keable, SM; Aydin, AO; Tono, K; Owada, S; Gee, LB; Fuller, FD; Batyuk, A; Alonso-Mori, R; Holton, JM; Paley, DW; Moriarty, NW; Mamedov, F; Adams, PD; Brewster, AS; Dobbek, H; Sauter, NK; Bergmann, U; Zouni, A; Messinger, J; Kern, J; Yano, J; Yachandra, VK; **Structural evidence for intermediates during O<sub>2</sub> formation in photosystem II**, *Nature* **617**, 629–636 (2023) <https://doi.org/10.1038/s41586-023-06038-z>

- 225e. **Erratum for Pub 225:** *Optica* **10**, 1602-1604 (2023) <https://doi.org/10.1364/OPTICA.510641>
225. Doyle, MD; Halavanau, A; Zhang, Y; Michine, Y; Everts, J; Fuller, F; Alonso-Mori, R; Yabashi, M; Inoue, I; Osaka, T; Yamada, J; Inubushi, Y; Hara, T; Kern, J; Yano, J; Yachandra, VK; Rohringer, N; Yoneda, H; Kroll, T; Pellegrini, C; Bergmann, U; **Seeded stimulated X-ray emission at 5.9 keV**, *Optica* **10**, 513-519 (2023) <https://doi.org/10.1364/OPTICA.485989>
224. Bogacz, I; Makita, H; Simon, PS; Zhang, M; Doyle, MD; Chatterjee, R; Fransson, T; Weninger, C; Fuller, FD; Gee, LL; Sato, T; Seaberg, M; Alonso-Mori, R; Bergmann, U; Yachandra, VK; Kern, J; Yano, J; **Room temperature X-ray absorption spectroscopy of metalloenzymes with drop-on-demand sample delivery at XFELs**, *Pure and Applied Chemistry* (2023) <https://doi.org/10.1515/pac-2023-0213>
223. Zhang, H; Li, W; Essman, J; Quarti, C; Metcalf, I; Chiang, W-Y; Sidhik, S; Hou, J; Fehr, A; Attar, A; Lin, M-F; Britz, A; Shen, X; Link, S; Wang, X; Bergmann, U; Kanatzidis, MG; Katan, C; Even, J; Blancon, J-C; Mohite, AD; **Ultrafast relaxation of lattice distortion in two-dimensional perovskites**, *Nature Physics* **19**, 545-550 (2023) <https://doi.org/10.1038/s41567-022-01903-6>
222. Simon, PS; Makita, H; Bogacz, I; Fuller, FD; Bhowmick, A; Hussein, R; Ibrahim, M; Zhang, M; Chatterjee, R; Cheah, MH; Chernev, P; Doyle, M; Brewster, AS; Alonso-Mori, R; Sauter, NK; Bergmann, U; Dobbek, H; Zouni, A; Messinger, J; Kern, J; Yachandra, VK; Yano, J; **Capturing the sequence of events during the water oxidation reaction in photosynthesis using XFELs**, *FEBS Letters* **597**, 30-37 (2023) <https://doi.org/10.1002/1873-3468.14527>
221. Vester, P; Kubicek, K; Assefa, TA; Biasin, E; Christensen, M; Dohn, AO; van Driel, TB; Galler, A; Gawelda, W; Harlang, TC; Henriksen, NE; Kjaer, KS; Kuhlmann, TS; Németh, Z; Nurekeyev, Z; Pápai, M; Vankó, G; Yavas, H; Bregenholt Zederkof, D; Bergmann, U; Nielsen, MM; Møller, KB; Haldrup, K; Bressler, C; **Tracking structural solvent reorganization and recombination dynamics following e<sup>-</sup> photoabstraction from aqueous I<sup>-</sup> with femtosecond X-ray spectroscopy and scattering**, *J. Chem. Phys.* **157**, 224201 (2022) <https://doi.org/10.1063/5.0107224>
220. Edwards, NP; Bargar, JR; van Campen, D; van Veelen, A; Sokaras, D; Bergmann, U; Webb, SM; **A new  $\mu$ -High Energy Resolution Fluorescence Detection microprobe imaging spectrometer at the Stanford Synchrotron Radiation Lightsource beamline 6-2**, *Review of Scientific Instruments* **93**, 083101 (2022) <https://doi.org/10.1063/5.0095229>
219. Georgiou, R; J Sahle, CJ; Sokaras, D; Bernard, S; Bergmann, U; Rueff, J-P; Bertrand, L; **X-ray Raman Scattering: A Hard X-ray Probe of Complex Organic Systems**, *Chemical Reviews* **122**, 12977 (2022) <https://doi.org/10.1021/acs.chemrev.1c00953>
218. Georgiou, R; Popelka-Filcoff, RS; Sokaras, D; Beltran, V; Bonaduce, I; Spangler, J; Cohen, SX; Lehmann, R; Bernard, S; Rueff, J-P; Bergmann, U; Bertrand, L; **Disentangling the Chemistry of Australian Plant Exudates from a Unique Historical Collection**, *Proc Natl Acad Sci* **119**, e2116021119 (2022) <https://doi.org/10.1073/pnas.2116021119>
217. Zhang, Y; Kroll, Th; Weninger, C; Michine, Y; Fuller, FD; Zhu, D; Alonso-Mori, R; Sokaras, D; Lutman, A; Halavanau, A; Pellegrini, C; Benediktovitch, A; Yabashi, M; Inoue, I; Inubushi, Y; Osaka, T; Yamada, J; Babu, G; Salpekar, D; Sayed, FN; Ajayan, PM; Kern, J; Yano, J; Yachandra, VK; Yoneda, H; Rohringer, N; Bergmann, U; **Generation of Intense Phase-Stable Femtosecond Hard X-ray Pulse Pairs**, *Proc Natl Acad Sci* **119**, e2119616119 (2022) <https://doi.org/10.1073/pnas.2119616119>
216. Ohmer, CJ; Dasgupta, M; Patwardhan, A; Bogacz, I; Kaminsky, C; Doyle, MD; Chen, PY-T; Keable, SM; Makita, H; Simon, PS; Massad, R; Fransson, T; Chatterjee, R; Bhowmick, A; Paley, DW; Moriarty, NW; Brewster, AS; Gee, LB; Alonso-Mori, R; Moss, F; Fuller, FD; Batyuk, A; Sauter, NK; Bergmann, U; Drennan, CL; Yachandra, VK; Yano, J; Kern, JF; Ragsdale SW; **XFEL serial crystallography reveals the room temperature structure of methyl-coenzyme M reductase**, *Journal of Inorganic Biochemistry* **230**, 111768

- (2022) <https://doi.org/10.1016/j.jinorgbio.2022.111768>
215. DePalma, RA; Oleinik, AA; Gurche, LP; Burnham, DA; Klingler, JJ; McKinney, CJ; Cichocki, FP; Larson, PL; Egerton, VM; Wogelius, RA; Edwards, NP; Bergmann, U; Manning, PL; **Seasonal calibration of the end cretaceous Chicxulub impact event**, *Scientific Reports* **11**, 23704 (2021) <https://doi.org/10.1038/s41598-021-03232-9>
214. Fransson, Th; Alonso-Mori, R; Chatterjee, R; Cheah, MH; Ibrahim, M; Hussein, R; Zhang, M; Fuller, FD; Gul, S; Kim, I-S; Simon, PhS; Bogacz, I; Makita, H; de Lichtenberg, C; Song, S; Batyuk, A; Sokaras, D; Massad, R; Doyle, M; Britz, A; Weninger, C; Zouni, A; Messinger, J; Yachandra, VK; Yano, J; Kern, J; Bergmann, U; **Effects of X-ray Free-Electron Laser Pulse Intensity on the Mn K $\beta$ 1,3 X-ray Emission Spectrum in Photosystem II - A Case Study for Metalloprotein Crystals and Solutions**, *Struct. Dyn.* **8**, 064302 (2021) <https://doi.org/10.1063/4.0000130>
213. Hussein, R; Ibrahim, M; Bhowmick, A; Simon, PS; Chatterjee, R; Lassalle, L; Doyle, M; Bogacz, I; Kim, I-S; Cheah, MH; Gul, S; de Lichtenberg, C; Chervnev, P; Pham, CC; Young, ID; Carbajo, S; Fuller, FD; Alonso-Mori, R; Batyuk, A; Sutherlin, KD; Brewster, AS; Bolotovskiy, R; Mendez, D; Holton, JM; Moriarty, NW; Adams, PD; Bergmann, U; Sauter, NK; Dobbek, H; Messinger, J; Zouni, A; Kern, J; Yachandra, VK; Yano, J; **Structural Dynamics in the Water and Proton Channels of Photosystem II During the S2 to S3 Transition**, *Nature Communications* **12**, 6531 (2021) <https://doi.org/10.1038/s41467-021-26781-z>
212. Fuller, FD; Mustoe, C; Uwe Bergmann, U; Alonso-Mori, R; Sokaras, D; Inoue, I; Yamada, J; Taito Osaka, T; **Analytic von Hamos geometry optimization and calibration**, *Proc. of SPIE* **11838** (2021) <https://doi.org/10.1117/12.2594019>
211. Rabe, P; Kamps, JJAG; Sutherlin, KD; Linyard, JDS; Aller, P; Pham, CC; Makita, H; Clifton, I; McDonough, MA; Leissing, ThM; Shutin, D; Lang, PA; Butryn, A; Brem, J; Gul, S; Fuller, FD; Kim, I-S; Cheah, MH; Fransson, Th; Bhowmick, A; Young, ID; O'Riordan, L; Brewster, AS; Pettinati, I; Doyle, M; Joti, Y; Owada, S; Tono, K; Batyuk, A; Hunter, MS; Alonso-Mori, R; Bergmann, U; Owen, RL; Sauter, NK; Claridge, TDW; Robinson, CV; Yachandra, VK; Yano, J; Kern, J; Orville, AM; Schofield, CJ; **X-ray free electron laser studies reveal correlated motion during isopenicillin N synthase catalysis**, *Science Advances* **7**, eabh0250 (2021) <https://doi.org/10.1126/sciadv.abh0250>
210. Ibrahim, M; Moriarty, NW; Kern, J; Holton, JM; Brewster, AS; Bhowmick, A; Bergmann, U; Zouni, A; Messinger, J; Yachandra, VK; Yano, J; Dobbek, H; Sauter, NK; Adams, PD; **REPLY TO WANG ET AL.: Clear evidence of binding of Ox to the oxygen-evolving complex of photosystem II is best observed in the omit map**, *Proc Natl Acad Sci*, **118**, e2102342118 (2021); <https://doi.org/10.1073/pnas.2102342118>
209. Fuller, FD; Loukianov, A; Takanashi, T; You, D; Li, Y; Ueda, K; Fransson, Th; Yabashi, M; Katayama, T; Weng, T-C; Alonso-Mori, R; Bergmann, U; Kern, J; Yachandra, VK; Wernet, Ph; Yano J; **Resonant X-ray Emission spectroscopy from broadband stochastic pulses at an X-ray free electron laser**, *Communications Chemistry* **4**, 84 (2021) <https://doi.org/10.1038/s42004-021-00512-3>
208. Halavanau, A; Zhou, G; Emma, C; A. Lutman, A; Ding, Y; Aquila, A; Krasnykh, A; Nguyen, DC; Aldaba, V; Montagne, T; Decker, F.-J.; Mayes, C; Zhu, D; Meuren, S; Reis, D; Huang, Z; A. Marinelli, A; Glenzer, S; Pellegrini, C; Coco, D; Bergmann, U; **Double Bunch FEL at LCLS-II**, LCLS-II technical note: LCLS-II-20-09, January 2021
207. Bergmann, U; Kern, J; Schoenlein, RW; Wernet, Ph; Yachandra, VK; Yano, J; **Using X-ray free-electron lasers for spectroscopy of molecular catalysts and metalloenzymes**, *Nature Reviews Physics* **3**, 264 (2021) <https://doi.org/10.1038/s42254-021-00289-3>
206. Reinhard, ME; Mara, MW; Kroll, Th; Lim, H; Hadt, RG; Alonso-Mori, R; Chollet, M; Glowina, JM; Nelson, S; Sokaras, D; Kunnus, K; van Driel, TB; Hartsock, RW; Kjaer, KS; Weninger, C; Biasin, E; Gee, LB; Hodgson, KO; Hedman, B; Bergmann, U; Solomon, EI; Gaffney, KJ; **Short-lived metal-centered excited state initiates iron-methionine photodissociation in ferrous cytochrome c**,

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7. Siddons, DP; Bergmann, U; Hastings, JB; Witte, K; Baberschke, K; **How to Open the Potential for Mössbauer Spectroscopy? Use a Corkscrew!** *Synchrotron Radiation News*, **6.2**, 34 (1993).
6. Nawrocky, RJ; Bergmann, U; Siddons, DP; **A Bunchkiller for the NSLS X-ray Storage Ring**. *IEEE, Proc. of the 1993 Particle Accelerator Conference*, **3**, 2145-47 (1993).
5. Siddons, DP; Bergmann, U; Hastings, JB; **Time-Dependent Polarization in Mössbauer Experiments with Synchrotron Radiation - Suppression of Electronic Scattering**. *Phys. Rev. Lett.*, **70**, 359-362 (1993).
4. van Bürck, U; Siddons, DP; Hastings, JB; Bergmann, U; Hollatz, R; **Nuclear Forward Scattering of Synchrotron Radiation**. *Phys. Rev. B*, **46**, 6207-6211 (1992).
3. Hastings, JB; Siddons, DP; van Bürck, U; Hollatz, R; Bergmann, U; **Mössbauer Spectroscopy using Synchrotron Radiation**. *Phys. Rev. Lett.*, **66**, 770-773, (1991).
2. Grote, M; Röhlberger, R; Gerdau, E; Hellmich, R; Bergmann, U; Harsdorff, M; Chambers, M; Pfützner, W; **Preparation and Characterization of GIAR Films for Monochromatization of Synchrotron Radiation**, *Hyperfine Interactions*, **58**, 2439-2444 (1990).
1. Röhlberger, R; Grote, M; Bergmann, U; Gerdau, E; and others. **Surface Roughness and Oxide Layers of Sputtered Polycrystalline Films**. *SPIE Proceedings*, **26**, 1160 (1989).

**Invited talks (2001 – October 2025):**

**Water**, Wisconsin Center for Origins Research (WICOR) Seminar, University of Wisconsin-Madison, Madison, WI October 02, 2025

**Chemical Mapping and Carbon Speciation Analysis of Ancient Materials with X-ray Spectroscopy**, Keynote Lecture, Synchrotron Radiation and Neutrons in Art and Archaeology (SR2A) Conference Getty Center, Los Angeles, California, October 9, 2025

**Stimulated X-ray Emission Spectroscopy: Probing Chemical Structure and Attosecond Dynamics**, ICESS-16 – 16th International Conference on Electronic Spectroscopy and Structure, Berkeley, CA, July 24, 2025

**Advances in Ultrafast X-ray Science**, Joint USA-European Symposium on Materials Simulations and Experiments using Machine Learning & Exascale Computing, Spetses, Greece, June 26, 2025

**Advances in Stimulated X-ray emission at Ångström Wavelengths**, 2025 Atomic Physics Gordon Research Conference, Salve Regina University, Newport, RI, June 17, 2025

**X-CAPPS – X-ray Coherent Attosecond Pulse Pair Spectroscopy**, Science Opportunities in Nonlinear Hard X-Ray Spectroscopy for Probing Chemical Dynamics in Dense Media, SLAC National Accelerator Laboratory, Menlo Park, CA, May 15, 2025

**Linear and Nonlinear Hard X-ray Emission Spectroscopy on Transition Metal Complexes: Surprises, Opportunities, Challenges**, Caught in Action: Time-Resolved Science at Light Sources, SLAC National Accelerator Laboratory, Menlo Park, CA, May 1, 2025

**Going Forward – Advances in Stimulated X-ray Emission at Ångström Wavelengths**, 14<sup>th</sup> Ringberg Workshop on Science with FELs, Schloss Ringberg, Tegernsee, Germany, February 3, 2025

**Recent Advances in Stimulated X-ray Emission Spectroscopy**, 2024 Atomic, Molecular and Optical Sciences Research PI Meeting, North Gaithersburg, MD, October 28, 2024

**Bringing Our History to Light – X-ray Imaging of Ancient Materials from Archimedes to Gutenberg**, Seminar at the Chester F. Carlson Center for Imaging Science, Rochester Institute of Technology, Rochester, New York, October 16, 2024

**Going Forward – Recent Surprises in Stimulated X-ray Emission Spectroscopy**, APS Colloquium, Argonne National Laboratory, Lemont, IL, September 4, 2024. Recording: [https://www.youtube.com/watch?v=O74fx3j-A\\_o](https://www.youtube.com/watch?v=O74fx3j-A_o)

**The Emerging Science of Femtosecond X-ray Sources**, Recent Advances in Experiment and Theory of Condensed Matter Systems and Exascale Computing Symposium in celebration of Priya Vashishta's 80<sup>th</sup> birthday, USC, Los Angeles, CA, August 9, 2024

**Making Movies of Molecules -The Emerging Science of Powerful X-ray Lasers**, Seminar at the Stanford Vi, Palo Alto, CA, August 5, 2024. Recording: <https://youtu.be/iyUdgHHXjoE>

**The Discovery and Characterization of Nonequilibrium Magnetic Phases in Strained Crystalline Membranes**, Joint USA-European Symposium on Machine Learning, Simulations, and Experiments, for Ultra-low Power Materials and Devices, Spetses, July 10, 2024

**Water under X-ray Vision – A Molecular Look at Life's Mysterious Elixir**, Astronomy Colloquium, University of Wisconsin-Madison, Madison, WI, April 11, 2024

**Going Forward—Recent Advances in Stimulated X-ray Emission Spectroscopy**, Prof. Frank de Groot's 60<sup>th</sup> Birthday Symposium 'Exploring the Depths of X-ray Spectroscopy—Past, Present, and Future', Utrecht, Netherlands, February 16, 2024

**Can X-rays Shed Light on the Origins of Printing?**, Synchrotron Symposium at the Canadian Chemistry Conference, CSC 2023, Vancouver, BC, June 6, 2023

**X-ray Fluorescence Imaging at SLAC**, Symposium on 'Telling the From Jikji to Gutenberg Story' Library of Congress, Washington, DC, April 13, 2023

**Recent Progress and Potential Applications of Stimulated X-ray Emission**, SACLA Users' Meeting 2023, Hyogo, Japan, March 3, 2023

**Stopping Time – The Emerging Science of Powerful X-ray Lasers**, 2022 SSRL/LCLS USERS' MEETING, 'SLAC Fundamentals' Workshop, Virtual Meeting, September 26, 2022

**Making Movies of Molecules - The Emerging Science of Powerful X-ray Lasers**, Colloquium at the Department of Physics and Astronomy at Purdue University, West Lafayette, IN, August 25, 2022

**Going Forward – Advances in Stimulated X-ray Emission Spectroscopy**, Plenary Talk, 18<sup>th</sup> International Conference on X-Ray Absorption and Fine Structure HYBRID, XAFS2022, Sydney, Australia, July 14, 2022

**Bringing Our History to Light – X-ray Imaging of Ancient Materials from Archimedes to Indigenous Australian Art**, Evening Lecture at the Chau Chak Wing Museum, The University of Sydney, Australia, July 12, 2022

**Advances in Linear and Nonlinear X-ray Emission Spectroscopy – Electronic Structure Probe and New Applications for Ultrafast X-ray Science**, ACS Symposium on "Opportunities and Challenges in Ultrafast X-ray Science in Chemistry: Theory and Experiment" at the ACS Spring Meeting, San Diego, March 24, 2022 (Zoom talk)

**New Results of Transition Metal X-ray Emission Spectroscopy at XFELs**, FXE Chemical Dynamics Workshop European XFEL, Zoom, November 2, 2021

**Making Movies of Molecules -The Emerging Science of Powerful X-ray Lasers**, Evening Lecture at Investiture Ceremony in the Department of Physics at UW-Madison, Madison, WI, September 9, 2021.

Recording: <https://www.physics.wisc.edu/department/alumni-friends/prof-bergmanns-investiture-ceremony/>

**Progress in Soft X-ray FEL-Enabled Spectroscopy** Workshop 'Towards an Ultra-Compact X-ray Free-Electron Laser' (UCLA) Zoom, July 20, 2021

**Imaging of the Syriac Galen Palimpsest with Powerful X-rays**. International Society for the History of Pharmacy, ISHP Virtual Symposium, Zoom, April 23, 2021

**X-ray Fluorescence Imaging of Ancient Palimpsests – From Archimedes of Syracuse to Galen of Pergamon**, XAS Journal Club (U Washington), Zoom, March 25, 2021

**X-ray Fluorescence Imaging of Ancient Palimpsests – From Archimedes of Syracuse to Galen of Pergamon**, R-CHIVE, Rochester Institute of Technology, New York, March 5, 2021

**X-ray Fluorescence Imaging of Ancient Palimpsests – From Archimedes to Galen**, Journées d'études interdisciplinaires, Paris, January 21, 2021

**A Population Inversion X-ray Laser Oscillator**, 'Science with Femtosecond X-ray Pulses' Workshop at the 2020 Virtual SSRL/LCLS Users' Meeting, SLAC National Accelerator Laboratory, September 28, 2020

**Archimedes Brought to Light - Synchrotron X-ray Imaging of Ancient Writings**, Physics Colloquium at Ohio State University, Ohio, September 8, 2020

**How to Conquer the Data Challenge at High- Repetition Rate X-Ray Lasers**, CONFERENCE ON A FAIR DATA INFRASTRUCTURE FOR MATERIALS GENOMICS Berlin, Germany, June 4, 2020  
(Zoom meeting, presentation YouTube link: <https://youtu.be/-dzCYnixsp8>)

**Verborgen im Pergament: Röntgenstrahl enthüllt älteste Schriften von Archimedes**, Rotary Club Frankfurt am Main Palmengarten, Online-Meeting, 27. Mai 2020

**X-ray Fluorescence Imaging of Ancient Writings – From Archimedes of Syracuse to Galen of Pergamon**, Pitcon 2020, The Science behind Cultural Heritage Materials: Preserving our Past, Chicago, IL, March 4, 2020

**Non-Linear X-ray Emission Spectroscopy on 3d Transition Metals**, Soft X-ray RIXS Workshop, SLAC National Accelerator Laboratory, Menlo Park, CA, February 3, 2020

**Non-Linear X-ray Emission Spectroscopy on 3d Transition Metals**, UK X-FEL Science Case: Workshop on Chemical Dynamics and Energy G.003, Urban Sciences Building, Newcastle University, December 11, 2019

**Verborgen im Pergament: Röntgenstrahl enthüllt älteste Schriften von Archimedes**, Innenansichten – Die Welt für Röntgen, Universität im Barockschloss, Mannheim, Germany, November 14, 2019

**Synchrotron-Rapid-Scan X-ray Fluorescence Imaging of the Syriac Galen Palimpsest**, Exploring the Syriac Galen Palimpsest, The John Rylands Library, University of Manchester, England, November 1, 2019

**Science Opportunities with Powerful New X-ray Sources**, Herb Seminar at University of Wisconsin-Madison, Madison, WI, October 3, 2019

**Non-Linear X-ray Emission Spectroscopy on 3d Transition Metals**, Developments & Challenges in X-ray Spectroscopies and Ultrafast Dynamics: Experiment and Theory, Workshop at the 2019 Annual LCLS/SSRL Users Meeting SLAC, September 27, 2019

**Non-Linear X-ray Emission Spectroscopy at SACLA BL3**, SALCA User Meeting 2019, Hyogo, Japan, August 29, 2019

**Stimulated X-ray Emission Spectroscopy**, SALCA User Meeting 2019, Hyogo, Japan, August 29, 2019

**New Science Opportunities at X-ray Free Electron Lasers**, Seminar at The University of Western Ontario, London, Ontario, July 26, 2019

**Making Movies of Molecules – The Science and Application of SLAC’s New X-ray Laser**, SLAC Summer Intern Seminar, SLAC National Accelerator Laboratory, Menlo Park, CA July 9, 2019

**Uncovering Hidden Writings with X-ray Vision**, Lecture at Palo Alto Rotary Club, Palo Alto, CA, April 1, 2019

**Making Movies of Molecules – The Science and Application of SLAC’s New X-ray Laser**, Lecture at Kiwanis Club of Palo Alto, Palo Alto, CA, May 16, 2019

**New Science Opportunities at X-ray Free Electron Lasers**, Physics Colloquium at University of Wisconsin-Madison, Madison, WI, April 26, 2019

**Recent Advances in X-ray Fluorescence Imaging and X-ray Raman based Carbon Speciation of Ancient Materials**, WORLD MEETING PARIS 2019, Heritage Sciences and Technologies, Scientific Symposium, Frontiers in Heritage Science, Paris, France, February 14, 2019

**X-ray Fluorescence Imaging of Ancient Materials - From Archimedes to Archaeopteryx and Beyond**, SLAC Colloquium, SLAC National Accelerator Laboratory, Menlo Park, CA, November 26, 2018

**Non-Linear X-ray Methods**, LCLS-II-HE Advanced Methods & Instrumentation Workshop, SLAC National Accelerator Laboratory, Menlo Park, CA, October 16, 2018

**Seeing the Invisible - The Science and Applications of Powerful X-Rays**, Business and Technology Services Town Hall, SLAC, CA, August 16, 2018

**Stimulated X-Ray Emission Spectroscopy in Transition Metal Complexes**, Invited talk at Chemical Applications of Ultrafast X-ray/XUV Spectroscopy and Scattering Symposium at the ACS Fall National Meeting 2018, Boston, MA, August 22, 2018

**Seeing the Invisible - The Science and Applications of Powerful X-Rays**, Business and Technology Services Town Hall, SLAC National Accelerator Laboratory, CA, August 16, 2018

**The Science and Application of Powerful X-rays**, COSMOS Students and Teachers Visit, SLAC National Accelerator Laboratory, CA, July 26, 2018

**X-ray Fluorescence Imaging of Ancient Materials - From Archimedes to Archaeopteryx and Beyond**, Plenary lecture for UNESCO International Day of Light at Ancient Materials’ Training School Organized by IPANEMA (CNRS, MiC, UVSQ) H2020 project Open Sesame, Cyprus Institute, Nicosia, Cyprus, May 16, 2018

**X-ray Fluorescence Imaging of Ancient Materials - From Archimedes to Archaeopteryx and Beyond**, 5<sup>th</sup> Moossa J. Arman Physics Colloquium: Science and Innovation, University of California Los Angeles, April 16, 2018

**Bringing the Dino-Birds to Life – Synchrotron X-ray Fluorescence and Raman Imaging of Ancient Materials**, 2018 Joint meeting of DPG and EPS Condensed Matter Divisions, TU Berlin, March 16, 2018

**Water under X-ray Vision – A New Look at Life’s Mysterious Elixir**, Plenary Lecture at Darwin Week, College of Charleston, February 5, 2018

**Making Movies of Molecules – The Science and Applications of X-Ray Lasers**, Physical Chemistry Seminar at University of Illinois at Urbana-Champaign, October 25, 2017

**Probing Chemical Reactions with High-Resolution X-ray Spectroscopy**, Workshop: High-Energy Resolution Methods in X-ray Absorption Spectroscopy, Australian Synchrotron, Clayton, Victoria, Australia, September 18, 2017

**The Science and Application of Powerful X-rays**, COSMOS Students and Teachers Visit, SLAC National Accelerator Laboratory, CA, July 28, 2017

**Making Movies of Molecules – The Science and Applications of X-Ray Lasers**, Seminar at Rice University, Houston, Texas, April 13, 2017

**Les traités d’Archimède enfin déchiffrés Les rayons X au service de la connaissance et de la valorisation des manuscrits (The treatises of Archimedes finally deciphered)** Bibliothèque nationale de France, Site François Mitterrand, Paris, March 2, 2017

**X-ray Spectroscopy and Diffraction of reaction intermediates using an X-ray Free Electron Laser**, Heliobio Seminar, Synchrotron SOLEIL, Gif-sur-Yvette, France, February 27, 2017

**Making Movies of Molecules – The Science and Applications of X-Ray Lasers**, Seminar, Synchrotron SOLEIL, Gif-sur-Yvette, France, February 13, 2017

**Déchiffrer des documents anciens à l’aide de méthodes de rayons X modernes (Deciphering ancient Documents with modern X-ray methods)**, Journée FSP-PATRIMA / EPHE Études avancées de documents graphiques c, Paris, January 24, 2017

**Synchrotron X-ray Imaging of Cultural Heritage: A Collaboration**, Seminar at Stanford East Asia Library, Stanford. October 20, 2016

**Seeing the Invisible – The Science and Applications of X-Rays**, 2016 Los Altos High School STEM Week, Los Altos, CA, October 27, 2016

**Synchrotron X-ray Fluorescence Imaging since the Archimedes Palimpsest**, Conference ‘Hidden Treasure: Medieval Manuscript Fragments and Digital Research Methods’, Universiteit Leiden, September 27, 2016

**X-ray Spectroscopy and Diffraction of reaction intermediates using an X-ray Free Electron Laser**, Workshop on ‘New Frontiers and Emerging Techniques’ at the annual Diamond Synchrotron Radiation User Meeting, Oxfordshire, UK, September 9, 2016

**Rapid Scan X-ray Fluorescence Imaging in Cultural Heritage and Beyond**, Gordon Research Conference on Scientific Methods in Cultural Heritage Research, Sunday River, Newry, ME, August 1, 2016

**The Science and Application of Powerful X-rays**, COSMOS Students and Teachers Visit, SLAC National Accelerator Laboratory, CA, July 29, 2016

**High-resolution Photon-in Photon-out Spectroscopy and Imaging with Hard X-rays**, CHESS “Hard X-ray Spectroscopies and Imaging Workshop”, Ithaca, NY, June 20, 2016

**Hard X-ray Photon-in Photon-Out Spectroscopy at X-ray Free Electron Lasers**, Stockholm Symposium on “Fundamental X-ray Science and its Application to Catalysis and Water Research: Future Directions”, Stockholm University, Sweden, May 12, 2016

**Making Movies of Molecules – The Science and Applications of X-Ray Lasers**, Department of Physics Colloquium, University of Wisconsin-Milwaukee, April 22, 2016

**Seeing the Invisible – The Science and Applications of X-Rays**, STIP 2016 Meeting at SLAC, Menlo Park, CA, April 11, 2016

**Perspectives on X-ray Facility Research and Interdisciplinarity**, Matériaux du patrimoine et patrimoine matériel, Atelier interdisciplinaire, Ecole Polytechnique, March 9, 2016

**New X-ray Imaging Approaches and Capacities of Novel Light Sources in Heritage Sciences**, Heritage Sciences: Issues and Perspectives, Muséum national d’histoire naturelle, Paris, March 9, 2016

**Making Movies of Molecules – The Science and Applications of X-Ray Lasers**, Physics Colloquium, UC Santa Cruz, California, February 4, 2016

**Observation of Strongly Stimulated X-ray Emission from Manganese Solutions at the 5.9 keV  $K\alpha$  Fluorescence**, invited talk at PQE-2016, The 46<sup>th</sup> Winter Colloquium on the Physics of Quantum Electronics, Snowbird, Utah, January 6, 2016

**X-ray Emission Spectroscopy of Transition Metal Systems using an X-ray Free Electron Laser**, Plenary Talk at IXS 2015, The 9th International Conference on Inelastic X-Ray Scattering Hsinchu, Taiwan, November 24, 2015

**X-ray Fluorescence Imaging at SLAC – Recent Results and New Ideas**, invited talk at the Bay Area Conservation Science Initiative Exploratory Meeting, Cantor Art Center, Stanford, CA, November 5, 2015

**Seeing the Invisible – The Science and Applications of X-Rays**, Physics Colloquium, New Mexico State University, Las Cruces, NM, October 29, 2015

**Hard X-ray Emission Spectroscopy in Transition Metal Complexes at the LCLS**, Seminar at European XFEL, Hamburg, September 16, 2015

**Hard X-ray Emission Spectroscopy in Transition Metal Complexes at the LCLS**, Seminar at Helmholtz Zentrum Berlin, Germany, September 14, 2015

**World Class Scientific Research with Synchrotron Radiation: An Overview**, Lecture at COSMOS Students and Teachers Visit, SLAC National Accelerator Laboratory, CA, July 22, 2015

**Making Movies of Molecules – The Science and Application of X-rays Lasers**, SULI Student Lecture, SLAC National Accelerator Laboratory, CA, July 22, 2015

**Seeing the Invisible – The Science and Applications of X-Rays**, Lecture at the Stanford Summer Research for Teachers Program Group, SLAC National Accelerator Laboratory, July 6, 2015

**Making Movies of Molecules – The Science and Applications of X-Ray Lasers**, Chemistry Seminar at University of Utah, Salt Lake City, Utah, May 11, 2015

**Making Movies of Molecules – The Science and Applications of X-Ray Lasers**, Seminar at ARUP Laboratories, Salt Lake City, Utah, May 11, 2015

**Seeing the Invisible – The Science and Applications of X-Rays**, Seminar at Spectra-Physics, Santa Clara, CA, May 8, 2015

**Light Sources in Life Sciences – Current Work and Future Prospects**, Canadian Light Source 18<sup>th</sup> Annual Users' Meeting and Workshops, Perspectives on Furthering Synchrotron Research in the Biological and Life Sciences workshop, Saskatoon, Canada, May 5th, 2015

**The Study of Solar Fuels with Powerful New X-ray Sources**, 1<sup>st</sup> International Solar Fuels Conference (ISF-1), Uppsala, Sweden, April 27, 2015

**Making Movies of Molecules – The Science and Application of X-rays Lasers**, Stanford Applied Physics 483 Optics & Electronics Seminar, Stanford, CA, April 13, 2015

**Making Movies of Molecules – The Science and Application of X-rays Lasers**, AAAS 2015 Annual Meeting, Celebration of 2015: The International Year of Light, San Jose, CA, February 13, 2015

**Going Ultra-Short and Ultra-Bright – The Science and Applications of the World's first X-ray Free Electron Laser**, Physics Colloquium, Kansas State University, January 26, 2015, Manhattan, Kansas

**Solving Protein Structures at Room Temperature with an X-Ray Free Electron Laser**, Beijing Institute of Technology's 5<sup>th</sup> World Gene Convention, Annual Congress of Molecular Medicine, Haikou, China, November 15, 2014

**Seeing the Invisible – The Science and Applications of X-Rays**, PIER Graduate Week, Interdisciplinary workshop and lecture week for PhD students, Hamburg, Germany, October 6, 2014

**X-ray Fluorescence Imaging: From Archimedes to Archaeopteryx and Beyond**, Synchrotron Radiation and Neutrons in Art and Archeology Conference, Invited Lecture in the Public Session, Musée du Louvre, Paris, September 10, 2014

**LCLS – Highlights and Future Upgrades**, Seminar at Elettra-Sincrotrone Trieste, Italy, September 8, 2014

**X-ray Free-Electron Lasers: Next-Generation Crystallography**, C&EN ACS Webinar, August 7, 2014

**The Science and Application of X-Rays at the Structural Biology Facilities at SLAC National Accelerator Laboratory**, FASEB, International Biology and Biomedical Conferences, Snowmass, CO, August 1, 2014

**Studying Photosynthesis with the World's Most Powerful X-ray Laser**, SULI Talk, SLAC National Accelerator Laboratory, Menlo Park, CA, July 16, 2014

**Durchleuchtet - Röntgenstrahl enthüllt Archimedes älteste Schriften**, Öffentliches Helmholtz-Symposium, Haus der Wissenschaft, Braunschweig, Germany, June 24, 2014

**Seeing the Invisible – The Science and Applications of X-Rays**, Silicon Valley Nexus, Art/Science/Technology, May 28, 2014, Nature Gallery, Los Altos, CA

**LCLS Update and New Developments**, Workshop on Advanced X-Ray FEL Development, DESY, Hamburg, Germany, May 21, 2014

**Project Update and New Developments at LCLS**, 6<sup>th</sup> Hard X-Ray FEL Collaboration Meeting, DESY, Hamburg, Germany, May 19, 2014

**The LCLS Free Electron X-Ray Laser - Overview of Facility and its Science**, Palo Alto Colloquium, Lockheed Martin, Palo Alto, CA, May 15, 2014

**Seeing the Invisible – The Science and Applications of X-Rays**, National Science Bowl, Bethesda, MD, April 25, 2014

**LCLS – The Upgrade Path**, American Physical Society Spring Meeting, Savannah, Georgia, April 6, 2014

**Seeing the Invisible - The Science and Applications of X-Rays**, Leonardo Art/Science Evening Rendezvous of Stanford University, Packard Auditorium in the Hewlett Teacher Center, December 12, 2013

**Studying Photosynthesis with the World's Most Powerful X-ray Laser**, SULI Talk, SLAC National Accelerator Laboratory, Menlo Park, CA, June 26, 2013

**LCLS – The New X-Ray Laser at SLAC**, Physics and Astronomy Colloquium, Sacramento State University, Sacramento, CA, March 21, 2013

**Simultaneous Femtosecond X-ray Spectroscopy and Diffraction of Photosystem II at Room Temperature** Fourth Workshop on Science with FELs, Schloss Ringberg, Germany, February 20, 2013

**Archaeopteryx - Bringing the Dino-Birds to Life**, Invited Lecture at 2012 California Science Education Conference, San Jose, CA October 20, 2012

**Overview – Role of Light Sources in Research**, Workshop: De-Mystifying the Light Source Experience – 2012 SSRL/LCLS Users' Conference & Workshops, SLAC National Accelerator Laboratory, Menlo Park, CA, October 03, 2012

**Science at the LCLS – A First Summary**, Physics and Astronomy Colloquium, University of Southern California, Los Angeles, CA, September 17, 2012

**The LCLS Free Electron X-Ray Laser – Overview of Facility and Science**, 8<sup>th</sup> Annual DOE Laser Safety Officer Workshop, SLAC National Accelerator Laboratory, Menlo Park, CA, September 11, 2012

**Time resolved X-Ray Spectroscopy of Photosynthetic Water Splitting – What We Would Like to Do in the Future**, LBNL Workshops on: Refining Science Requirements for the Next Generation Light Source, LBNL, Berkeley, CA, August 23, 2012

**X-ray Raman and Emission Spectroscopy - Recent Results and new Opportunities for X-Ray Free Electron Lasers**, International Conference on Raman Spectroscopy, Bangalore, India, August 13, 2012

**X-Ray Research Facilities at SLAC**, Seminar at Robert Bosch LLC, Research and Technology Center Palo Alto, CA, July 23, 2012

**Biology at the LCLS – A First Summary**, Structural Molecular Biology Summer School 2012, SLAC, National Accelerator Laboratory, Menlo Park, CA, July 17, 2012

**Bringing the Dino-Birds to Life**, SULI Talk, SLAC National Accelerator Laboratory, Menlo Park, CA, July 16, 2012

**LCLS – The X-Ray Free Electron Laser at SLAC**, Hewlett Packard R&D Engineering Seminar, Palo Alto, CA, June 21, 2012

**Bringing the Dino-Birds to Life**, Seminar, Synchrotron SOLEIL, Gif-sur-Yvette, France, May 15, 2012

**Science at the LCLS – A First Summary**, Seminar, Synchrotron SOLEIL, Gif-sur-Yvette, France, May 14, 2012

**Jitter Corrections at LCLS**, Workshop: X-rays in the Fourth Dimension, Chicago, Illinois, May 05, 2012

**Bringing the Dino-Birds to Life**, Santa Clara Valley Audubon Society Lecture, Cubberly Community Center, Palo Alto, CA, April 18, 2012

**Structure Determination of Biomolecules with Femtosecond X-ray Pulses**, Stanford Symposium on Biomedical Imaging, Stanford University, CA, April 6, 2012

**Archimedes' Oldest Writings Under X-ray Vision**, Physics Colloquium, Northern Illinois University, DeKalb, IL, March 23, 2012

**Bringing the Dino-Birds to Life**, Physics and Astronomy Colloquium, University of Minnesota, Twin Cities, March 21, 2012

**Finding an Individual Atom**, Palo Alto University Rotary Club Salon, Palo Alto, CA, March 14, 2012

**Bringing the Dino-Birds to Life**, PIER Photon Science Colloquium, DESY, Hamburg, Germany, March 2, 2012

**Science at LCLS – A First Summary**, XFEL Seminar, European X-Ray Free Electron Laser, Hamburg, Germany, March 1, 2012

**Science at LCLS – A First Summary**, Helmholtz Zentrum Berlin Science with Photons Seminar, Berlin, Germany, February 29, 2012

**Science at LCLS – A First Summary**, Celsius-Linné Symposium, Uppsala University, Uppsala, Sweden, February 17, 2012

**Bringing the Dinobirds to Life**, KBC Lecture, Umeå University, Umeå, Sweden, February 15, 2012

**X-ray Free Electron Lasers – a Powerful New Tool for Astrophysics**, Radcliffe Seminar, Condensed Matter Astrophysics, The Rise of Complexity Harvard University, Cambridge, MA, January 27, 2012

**Rapid-Scan X-Ray Fluorescence Imaging – From Archimedes to Archaeopteryx**, Astrophysics Colloquium, SLAC National Accelerator Laboratory, Menlo Park, CA, October 27, 2011

**Bringing the Dinobirds to Life**, Lockheed Martin Colloquium, Palo Alto, CA, October 7, 2011

**Making Molecular Movies**, Palo Alto International Film Festival, Palo Alto, CA, October 1, 2011

**Range-Extended EXAFS and Advanced Methods**, Synchrotron X-Ray Absorption Spectroscopy Summer School, SLAC National Accelerator Laboratory, Menlo Park, CA, June 28, 2011

**Seeing the Invisible**, TEDx Lecture Series at Gunn High School, Palo Alto CA, May 26, 2011 (talk is on Youtube at: <http://www.youtube.com/watch?v=K7Rnk9DFPiU>)

**LCLS – First Science And New Opportunities**, DOE Office of Science Colloquium, Germantown, MD, April 8, 2011

**My Journey at SLAC**, SLAC 20, 30 and 40 year employee recognition celebration, SLAC National Accelerator Laboratory, Menlo Park, CA, March 30, 2011

**Darwin's Dinobird Under X-Ray Vision**, Palo Alto University Rotary Club Lecture, Palo Alto, CA, March 25, 2011

**Archaeopteryx - Bringing the Dinobird to Life**, SLAC Special Lunch Lecture, SLAC National Accelerator Laboratory, Menlo Park, CA, January 26, 2011

**Archaeopteryx - Bringing the Dinobird to Life**, SLAC Public Lecture, SLAC National Accelerator Laboratory, Menlo Park, CA, January 25, 2011

(lecture can be seen at: [http://www2.slac.stanford.edu/lectures/default.asp?id=lecture\\_video&eventID=162](http://www2.slac.stanford.edu/lectures/default.asp?id=lecture_video&eventID=162))

**LCLS – One Year After the X-Ray Laser has Turned on**, SLAC Colloquium, SLAC National Accelerator Laboratory, Menlo Park, CA, November 29, 2010

**LCLS – The X-Ray Laser Has Turned On** Physics Colloquium, University of California, Santa Cruz, CA, November 18, 2010

**Rapid-Scan X-Ray Fluorescence Imaging of Ancient Documents - The Archimedes Project and Beyond,** 2010 Eastern Analytical Symposium & Exposition, Garden State Exhibit Center, Somerset, NJ, November 15, 2010

**LCLS – The X-Ray Laser has Turned on,** APS Colloquium, Argonne National Laboratory, Argonne, IL, November 3, 2010

**Rapid-Scan X-ray Fluorescence Imaging of Ancient Documents,** EIKONOPOIIA, Digital imaging of ancient textual heritage: technological challenges and solutions, Helsinki, October 28, 2010

**X-ray Vision – Revealing Ancient Secrets with New Technology,** USA Science and Engineering Festival, AAAS Meet the Scientist, Washington DC, October 23, 2010

**LCLS – First Science and Future,** The 16<sup>th</sup> Pan-American Synchrotron Radiation Instrumentation Conference, Argonne National Laboratory, Argonne, IL, September 24, 2010

**Rapid-Scan X-Ray Fluorescence Imaging – The Archimedes Project and Beyond,** SULI Talk, SLAC, July 29, 2010

**Science and Technology of Future Light Sources,** National User Facility Organization Annual Meeting Brookhaven National Laboratory, Upton, New York, June 8, 2010

**Archimedes' Oldest Writings Under X-ray Vision,** Physics Colloquium, UCLA, Los Angeles, CA, April 29, 2010

**Rapid-Scan X-ray Fluorescence Imaging of Ancient Documents,** 8<sup>th</sup> SESAME User's Meeting, Petra, Jordan, November 19, 2009

**Archimedes' Oldest Writings Under X-Ray Vision,** Physics Colloquium, California State University, Long Beach, CA, October 5, 2009

**Advanced Hard X-ray Spectroscopy – Recent Results on Water and 3d Transition Metal Systems,** 14<sup>th</sup> International Conference on X-ray Absorption Fine Structure (XAFS XIV), Camerino, Italy, July 28, 2009

**(Resonant) Inelastic X-Ray Scattering and X-Ray Emission Spectroscopy,** SSRL School on Synchrotron Absorption Spectroscopy Techniques, SLAC National Accelerator Laboratory, Menlo Park, CA, June 2, 2009

**Archimedes' Oldest Writings Under X-ray Vision,** Brookhaven Women in Science Lecture, Berkner Hall Auditorium, Brookhaven National Laboratory, Upton, NY, May 20, 2009

**Advanced Hard X-Ray Spectroscopy – Recent Results on Water and 3d Transition Metals,** 2009 Joint NSLS and CFN Users' Meeting, Brookhaven National Laboratory, Upton, NY, May 19, 2009

**Archimedes: Ancient Text Revealed with X-ray Vision,** Society of California Archivists 38th Annual Meeting, Riverside, CA, May 8, 2009

**Archimedes' Oldest Writings under X-ray Vision,** Sigma Xi Science Seminar, Loyola Marymount University, Los Angeles, CA, March 23, 2009

**Archimedes' Oldest Writings under X-ray Vision,** Sigma XI Induction Ceremony and Dinner, Loyola Marymount University, Los Angeles, CA, March 22, 2009

**X-ray Vision: Not Just for Superman Anymore,** Los Altos High School Science & Technology Speaker Series, Los Altos CA, March 09, 2009

**Archimedes Palimpsest: Reading the Unreadable**, AAAS Annual Meeting 2009, Session: Casting New Light on Ancient Secrets, Chicago, IL, February 16, 2009

**X-ray Vision: Not Just for Superman Anymore**, Meet the Scientists at AAAS Family Science Day, AAAS Annual Meeting 2009, Chicago, IL, February 15, 2009

**Pseudo-Color Enhanced X-ray Fluorescence Imaging of the Archimedes Palimpsest**, IS&T/SPIE Electronic Imaging Symposium, Document Recognition and Retrieval, San Jose, CA, January 21, 2009

**Verborgten im mittelalterlichen Pergament: Röntgenstrahl enthüllt Archimedes' älteste Schriften**, Public Lecture, Humboldt Gymnasium Karlsruhe, Germany, November 25, 2008

**The Archimedes Palimpsest under X-ray Vision**, Dinner Talk, 2008 Annual Meeting of the California Section of the American Physical Society, California State University, Dominguez Hills, California, October 17, 2008

**Secrets in the Ancient Goatskin: X-Rays Reveal Archimedes' Oldest Writings**, APS Colloquium, Argonne National Laboratory, Argonne, Illinois, April 2, 2008

**Advanced X-ray Spectroscopy**, Yachandra Group Seminar, Lawrence Berkeley National Laboratory, Berkeley, California, March 12, 2008

**Secrets in the Ancient Goatskin: Archimedes' Oldest Writings under X-ray Vision**, Physics Colloquium, California State University, Sacramento, California, February 28, 2008

**Visit at the Accelerator: Archimedes' Writings under X-ray Vision**, University of New Mexico, College of Arts and Sciences Institute for Medieval Studies presents Archimedes Revealed: A Public Colloquium on Ancient Science, Medieval Manuscripts, and Modern Technology, Albuquerque, New Mexico, February 16, 2008

**Spectroscopy Experiments and the XFEL**, Second European XFEL Users' Meeting, DESY, Hamburg, Germany, January 23, 2008

**Secrets in the Ancient Goatskin: Archimedes' Oldest Writings under X-ray Vision**, Physics Colloquium, UC Santa Cruz, Santa Cruz, California, January 17, 2008

**Secrets in the Ancient Goatskin: Archimedes' Oldest Writings under X-ray Vision**, NIST Staff Colloquium Series, National Institute of Standards and Technology, Gaithersburg, Maryland, December 7, 2007

**Secrets of the Ancient Goatskin: X-rays Reveal Oldest Writings of Archimedes**, 2007 DOE Day of Science, Hosted by Oak Ridge National Laboratory at the Knoxville Convention Center, Knoxville, Tennessee, October 29, 2007

**Secrets of the Ancient Goatskin: X-rays Reveal Oldest Writings of Archimedes**, Physics Colloquium, University of San Francisco, San Francisco, California, October 24, 2007

**Inelastic X-ray Scattering, Advanced Spectroscopy and Water**, ALS/CXRO Seminar, Berkeley, California, October 17, 2007

**Rapid Scan X-ray Fluorescence Imaging of Large Objects at SSRL**, Workshop: New Opportunities in Microfocusing, 2007 SSRL User's Meeting, Stanford Linear Accelerator Center, Menlo Park, California, October 3, 2007

**Inelastic X-ray Scattering and Advanced Spectroscopy at SSRL**, 2007 SSRL User's Meeting, Stanford Linear Accelerator Center, Menlo Park, California, October 1, 2007

**Resonant and Non Resonant Inelastic X-ray Scattering**, Joint SSRL/ALS Workshop: Introduction to Synchrotron Radiation Techniques, 2007 SSRL User's Meeting, Stanford Linear Accelerator Center, Menlo Park, California, September 30, 2007

**Rapid-Scan X-Ray Fluorescence Imaging – New Opportunities not just for Old Objects**, Special Symposium on the Future of X-ray Science, 2007 SSRL User's Meeting, Stanford Linear Accelerator Center, Menlo Park, California, September 29, 2007

**Archimedes: Ancient Writings under X-ray Vision**, Fermilab Public Lecture Series, Fermi National Accelerator Center, Batavia, IL, September 28, 2007

**Verborgten im mittelalterlichen Pergament: Röntgenstrahl enthüllt Archimedes' älteste Schriften**, Public lecture (in German) at DESY, Hamburg, 11. September, 2007

**Inelastic X-ray Scattering and Advanced Spectroscopy with eV Resolution**, PETRA III Workshop: Nuclear Resonant and Inelastic X-ray Scattering, Hamburg, Germany, September 10, 2007

**Secrets in the Ancient Goatskin: Archimedes Manuscript under X-ray Vision**, Summer Reading, Palo Alto Library, Palo Alto, California, June 25, 2007

**Secrets in the Ancient Goatskin: Archimedes Manuscript under X-ray Vision**, Public lecture at Polish-American Engineers' Club June Meeting, Little House, Menlo Park, California, June 21, 2007

**Effects of isotope substitution, confinement and mixtures on the structure of liquid water - an X-ray Raman scattering study**, 6<sup>th</sup> International Conference on Inelastic X-ray Scattering IXS2007 at Awaji Yumebutai International Conference Center, Awaji, Japan, May 8, 2007

**Secrets in the Ancient Goatskin: Archimedes Manuscript under X-ray Vision**, Physics Colloquium, Ohio State University, Columbus, OH, May 1st, 2007

**Resonant and Non Resonant Inelastic X-ray Scattering**, XAS Short Course for Structural Molecular Biology Applications, Stanford Linear Accelerator Center, Menlo Park, CA, March 14, 2007

**Secrets in the Ancient Goatskin: Archimedes Manuscript under X-ray Vision**, Café Scientifique, Silicon Valley, SRI International, Menlo Park, CA, February 13, 2007

**Secrets in the Ancient Goatskin: Archimedes Manuscript under X-ray Vision**, Sonoma State University Public Lecture Series and Undergraduate Colloquium "What Physicists Do.", Rohnert Park, CA, February 12, 2007

**Secrets in the Ancient Goatskin: Archimedes Manuscript under X-ray Vision**, Plenary Session at Agilent Technical Conference, San Francisco Airport Marriott, Burlingame, CA, February 2, 2007

**Secrets in the Ancient Goatskin: Archimedes Manuscript under X-ray Vision**, Science Colloquium, Castilleja School, December 14, 2006

**Secrets in the Ancient Goatskin: Archimedes Manuscript under X-ray Vision**, Fermilab Colloquium, Fermi National Accelerator Center, Batavia, IL, November 29, 2006

**Archimedes Manuscript under X-ray Vision**, Physics Seminar, San José State University, San José, CA, November 16, 2006

**Secrets in the Ancient Goatskin: Archimedes Manuscript under X-ray Vision**, Physics Colloquium, Stanford University, Stanford, CA, October 17, 2006

**Secrets in the Ancient Goatskin: Archimedes Manuscript under X-ray Vision**, Menlo School, Atherton, CA, October 16, 2006

**Secrets in the Ancient Goatskin: The Latest Results from the Archimedes X-ray Imaging Project at SSRL**, SSRL Users' Meeting, Menlo Park, CA, October 12, 2006

**Resonant and Non Resonant Inelastic X-ray Scattering**, Joint ALS/SSRL User Meeting Workshop, Berkeley, CA, October 11, 2006

**Archimedes Manuscript under X-ray Vision**, SLAC Colloquium, Menlo Park, CA, September 25, 2006

**Raman Spectroscopy in the Hard X-ray Region: From the Structure of Water to Photosynthetic Water Splitting**, 20th International Conference on Raman Spectroscopy, Yokohama, Japan, August 21, 2006

**Advances in X-ray Raman Spectroscopy in Resonant and Non-Resonant Applications**, 66th Okazaki Conference "IWSXR" International Workshop on Soft X-ray Raman Spectroscopy and Related Phenomena, Okazaki, Japan, August 17, 2006

**Advanced X-ray Spectroscopy and its Application to Water and 3d Metal Compounds**, Stanford Environmental Molecular Science Institute 2<sup>nd</sup> Annual Meeting, Mitchell Bldg., Stanford, CA, August 7, 2006

**Archimedes: Ancient Text Revealed with X-ray Vision**, Stanford Summer Science Public Lecture Series, Cantor Art Center, Stanford, CA, August 3, 2006 (online viewing at <http://academicearth.org/lectures/archimedes-ancient-text-uwe-bergmann>)

**X-ray Raman based Absorption Spectroscopy: Going Tough on Low Z Systems**, 13<sup>th</sup> International Conference on X-ray Absorption Fine Structure, Stanford, CA, July 11, 2006

**O-O RDF from EXAFS in Raman Mode**, Stockholm Discussion Meeting, Structure and Molecular Scale Properties of Liquid Water, Stockholm, Sweden, June 15, 2006

**The Second Generation of X-Ray Emission Instrumentation**, Workshop at the NSLS/CFN Joint Users' Meeting on Chemical and Biological Applications of X-ray Emission Spectroscopy, Upton, NY, May 17th, 2006

**Archimedes Manuscript under X-ray Vision**, Social Event: Archimedes and the Universe at IEEE VTS'06 (24 VLSI Test Symposium), San Francisco Metreon, San Francisco, CA, May 2, 2006

**Advanced X-Ray Spectroscopy and Water**, Nilsson Collaborator Meeting, SSRL, Menlo Park, CA, February 28, 2006

**Archimedes Manuscript under X-ray Vision**, Physics Colloquium, Stony Brook University, Stony Brook, NY, February 7, 2006

**X-ray Raman Spectroscopy and the Structure of Water from Ambient to Extreme Conditions**, Warren Symposium of the Max-Planck Institute for Metal Research, Ringberg Castle, Tegernsee, Germany, January 23, 2006

**Archimedes – Accelerator Reveals Ancient Text**, SLAC Public Lecture, December 13, 2005 (online viewing at [http://www2.slac.stanford.edu/lectures/default.asp?id=lecture\\_video&eventID=25](http://www2.slac.stanford.edu/lectures/default.asp?id=lecture_video&eventID=25))

**Advances in X-ray Raman and Emission Spectroscopy**, CHESS Journal Club, Cornell, Ithaca, NY, December 2, 2005

**Archimedes Manuscript under X-ray Vision**, 32nd Annual SSRL Users' Meeting, Menlo Park, CA, October 17, 2005

**Application of Advanced Hard X-ray Spectroscopy and Inelastic Scattering to Catalysis**, Workshop on Catalysis Research at the Advanced Photon Source, Argonne National Laboratory, Argonne, IL, September 12-13, 2005

**Archimedes Manuscript under X-ray Vision**, Lockheed Martin, Palo Alto Colloquia, Palo Alto, CA, September 8, 2005

**Inelastic X-ray Scattering and Advanced Spectroscopy at SPEAR3**, Seminar at Greven Group Meeting, McCullough Bldg. Stanford University, Stanford, CA, August 31, 2005

**New Applications of Synchrotron Radiation: From A as in Archimedes to Z as in Zinc**, Seminar at Max-Planck Institute for Metal Research, Stuttgart, Germany, July 22, 2005

**Non-Resonant X-ray Raman Scattering – A Powerful New Tool to Study low Z Materials in Ambient and Extreme Conditions**, Seminar at DELTA, Dortmund, July 20, 2005

**X-Ray Raman Scattering – a Powerful New Tool to Study Light Element (Low Z) Systems**, 5th International Discussion Meeting on Relaxations in Complex Systems New results, Directions and Opportunities – Lille, France, July 9, 2005

**Wasser unter der Röntgenlupe – Ein Neuer Blick auf das rätselhafte Lebenselixir**, 6. Highlight-Kongress of the 'Deutsche Pharmazeutischen Gesellschaft' and the 'Pharmazeutische Zeitung', Worms, Germany, June 11, 2005

**Advanced X-ray Spectroscopy Techniques for SEMSI**, Stanford Environmental Molecular Science Institute PI Meeting, Monterey, CA, October 23, 2004

**Inelastic X-ray Scattering and Advanced Spectroscopy at SPEAR3**, SSRL Users' Meeting, Menlo Park, CA, October 4, 2004

**Non-resonant X-ray Raman scattering – a powerful new tool to study low Z materials in ambient and extreme conditions**, Lawrence Livermore Laboratory, Seminar in High Pressure Physics Group, Livermore, CA, August 25, 2004

**Recent Advances in Hard X-ray Inelastic Scattering with Medium Resolution**, Workshop for NSLS-II: The Future National Synchrotron Light Source Brookhaven National Laboratory, Upton, NY, March 15, 2004

**New X-ray Techniques to Study the OEC of Photosystem II**, 314th WE-Heraeus-Seminar "Water Oxidation in Photosynthesis", Bad Honnef, Germany, November 23, 2003

**Advances in High-Resolution Hard X-ray Spectroscopy: From Vibrational Studies to identify ligands to the Local Structure of Water**, NSLS Workshop: BIO-MATTERS: From IR to X-rays, Upton, NY, May 21, 2003

**X-ray Raman Spectroscopy - A New Tool to Study Local Structure of Aromatic Hydrocarbons and Asphaltenes**, International Conference on Heavy Organics Depositions, HOD 2002, Puerto Vallarta, Jalisco, Mexico, November 17-21, 2002

**Application of Novel Hard X-ray Spectroscopy to Transition Metal Systems**, Catalysis Workshop at SSRL, Menlo Park, CA, October 8-9, 2002

**Applications of Resonant and Non-Resonant IXS to Bio-Materials and Condensed Matter**, Workshop Inelastic X-ray Scattering/High Energy - X-ray Photoemission Spectroscopy at Synchrotron SOLEIL, Paris, France, June 4-5, 2002

**Inelastic X-ray Scattering and Electronic Excitations: New Spectroscopic Studies of Metalloproteins and Water**, Seminar at European Synchrotron Radiation Facility, Grenoble, France, June, 2002

**High-Resolution X-ray Spectroscopy on Biomaterials: Recent Results of X-ray Emission, RIXS and X-ray Raman Studies**, International Conference on Inelastic X-ray Scattering, Haikko, Finland, August 22-26, 2001

## Press Coverage (selected examples)

Publication 236 generated stories by UW-Madison: <https://www.physics.wisc.edu/2025/06/11/bergmann-group-achieves-shortest-hard-x-ray-pulses-to-date/>, SLAC National Accelerator Laboratory: <https://www6.slac.stanford.edu/news/2025-06-11-scientists-create-first-attosecond-atomic-x-ray-laser>, LBNL: <https://newscenter.lbl.gov/2025/06/24/atomic-x-ray-laser-opens-door-to-attosecond-imaging/>, and has received media coverage, including a 1-hour interview on the at Larry Meiller Show at Wisconsin Public Radio: <https://www.wpr.org/shows/larry-meiller-show/fastest-x-ray-laser-created-and-the-weather-guys-return>, Optics.org : <https://optics.org/news/16/6/20>, and other media outlets.

Publication 231 was chosen for the cover of the November 2023 edition of IUCrJ.

Publication 226, **Structural evidence for intermediates during O<sub>2</sub> formation in photosystem II**, *Nature* **617**, 629–636 (2023) <https://doi.org/10.1038/s41586-023-06038-z> was featured in a SLAC press release <https://www6.slac.stanford.edu/news/2023-05-03-researchers-capture-elusive-missing-step-final-act-photosynthesis> and subsequently in several news media outlets including, New Scientist (UK) <https://www.newscientist.com/article/2371738-decades-old-mystery-about-photosynthesis-finally-solved/>; The Register (UK) <https://www.theregister.com/2023/05/04/photosynthesis/>; US Today News <https://ustoday.news/scientists-observe-an-elusive-missing-step-in-the-final-stages-of-photosynthesis/>; La Nacion (Argentina) <https://www.lanacion.com.ar/agencias/captan-por-primera-vez-el-paso-de-la-fotosintesis-que-crea-el-oxigeno-nid03052023/>; Earth <https://www.earth.com/news/scientists-have-finally-decoded-the-process-of-photosynthesis/>; AZoCleanTech (UK/Australia) <https://www.earth.com/news/scientists-have-finally-decoded-the-process-of-photosynthesis/>; Informationsdienst Wissenschaft (Germany) <https://nachrichten.idw-online.de/2023/05/04/die-grosse-freisetzung-des-sauerstoffs/>; Yahoo Life <https://www.yahoo.com/lifestyle/scientists-observe-elusive-missing-step-in-photosynthesis-final-stage-214947146.html>;

Our XRF imaging work on early metal type print was featured in several news media outlets including, The Mercury News (<https://www.mercurynews.com/2022/07/25/stanford-linear-accelerator-probes-did-gutenberg-really-invent-printing/>), NBC (<https://www.nbcbayarea.com/news/local/south-bay/slac-machine-historic-documents/2959673/>) and various online magazines, including Gizmodo (<https://gizmodo.com/gutenberg-bible-historical-documents-x-ray-scans-slac-1849392210>), CNET (<https://www.cnet.com/science/the-particle-accelerator-experiment-that-could-rewrite-the-history-of-the-printing-press/>) and Wired (<https://www.wired.com/story/can-a-particle-accelerator-trace-the-origins-of-printing/>).

Publication 218, **Disentangling the Chemistry of Australian Plant Exudates from a Unique Historical Collection**, *Proc Natl Acad Sci*, **119**, e2116021119 (2022) <https://doi.org/10.1073/pnas.2116021119> was featured as an SSRL Highlight (<https://www-ssrl.slac.stanford.edu/content/science/highlight/2022-06-13/powerful-x-rays-explore-molecular-composition-historical-collection>) and SLAC News (<https://www6.slac.stanford.edu/news/2022-05-26-researchers-aim-x-rays-century-old-plant-secretions-insight-aboriginal-australian>) It was subsequently covered by some news outlets including: OI Canadian <https://oicanadian.com/researchers-direct-x-rays-at-century-old-plant-secretions-to-better-understand-australias-aboriginal-cultural-heritage/>; sciencesprings <https://sciencesprings.wordpress.com/2022/05/29/from-the-does-slac-national-accelerator-laboratory-researchers-aim-x-rays-at-century-old-plant-secretions-for-insight-into-aboriginal-australian-cultural-heritage/>

Publication 213 has been chosen by the editors at *Nature Communications* as an Editors' Highlights. It can be found on the webpage of recent research called "Structural biology, biochemistry and biophysics" and editor Karin Kuehnel chose to feature your article, entitled "Structural dynamics in the water and proton channels of photosystem II during the S<sub>2</sub> to S<sub>3</sub> transition". The webpage can be accessed at [www.nature.com/collections/hhfigaahch](http://www.nature.com/collections/hhfigaahch) and is linked prominently on our journal homepage (<https://www.nature.com/ncomms/>) and a dedicated Editors' Highlights page (<https://www.nature.com/ncomms/editorshighlights>). LBNL and SLAC also ran stories on the work, the SLAC story is at: <https://www6.slac.stanford.edu/news/2021-11-16-bucket-brigades-and-proton-gates-researchers-shed-new-light-waters-role>.

Publication 184 (**Pheomelanin pigment remnants mapped in fossils of extinct mammals**) was featured in a SLAC press release and received extensive press coverage including The New York Times <https://www.nytimes.com/2019/05/23/science/fossil-colors-red.html> and was also reported by [CNN](#), [Gizmodo](#), [Engadget](#), [Ars Technica](#), [Smithsonian Magazine](#), [KOED Science](#), [UPI](#), [Tech Times](#), [Cosmos](#), [CBS News](#), [Science](#), [Science News](#), and [The Daily Mail](#). Press release reprinted by [ScienceDaily](#) and [Phys.org](#).

Publication 179 (**Structures of the intermediates of Kok's photosynthetic water oxidation clock**) was featured in a SLAC press release and received wide media coverage including Gizmodo <https://gizmodo.com/how-plants-produce-oxygen-revealed-by-tour-de-force-las-1830285550>.

Publication 172 (**Ultrafast non-radiative dynamics of atomically thin MoSe<sub>2</sub>**) was selected as a DOE highlight 'How to turn Light into Atomic Vibrations', see: <https://www.energy.gov/science/bes/articles/how-turn-light-atomic-vibrations>

Publication 164 (**Structure of photosystem II and substrate binding at room temperature**) was featured in a SLAC press release <https://www6.slac.stanford.edu/news/2016-11-21-new-detailed-snapshots-capture-photosynthesis-room-temperature.aspx>, which was then featured in several news agencies. The R&D Magazine did an interview with me shown in <http://www.rdmag.com/news/2016/12/scientists-catch-snapshot-photosynthesis>

Publication 163 (**Elemental characterisation of melanin in feathers via synchrotron X-ray imaging and absorption spectroscopy**) got extensive press coverage around the world including the Daily Mail: <http://www.dailymail.co.uk/sciencetech/article-3804007/Showing-true-colours-Chemical-clues-modern-birds-reveal-dinosaurs-REALLY-looked-like.html> <<http://www.dailymail.co.uk/sciencetech/article-3804007/Showing-true-colours-Chemical-clues-modern-birds-reveal-dinosaurs-REALLY-looked-like.html>>. The article was also featured as the banner of the widely read website Popular Science <[www.popsci.com](http://www.popsci.com)> and gizmodo.com, see: <http://gizmodo.com/x-ray-images-of-bird-feathers-hold-the-secret-to-dinosa-1787199011>

Publication 149 (**X-ray Emission Spectroscopy of Bulk Liquid Water in "No-man's Land"**) was selected as a 2015 Editors' Choice article. <http://dx.doi.org/10.1063/1.4905603>  
The 2015 JCP Editors' Choice collection <<http://aip-info.org/1ZJX-47T3U-J6DAZO-23KYDM-1/c.aspx>> of 65 articles was hand-selected by the editors as the most innovative and influential articles of 2015. They are freely available to download through the end of 2016.

My invited public plenary talk to the Louvre (**X-ray Fluorescence Imaging: From Archimedes to Archaeopteryx and Beyond**, Synchrotron Radiation and Neutrons in Art and Archeology Conference, Invited Lecture in the Public Session, Musée du Louvre, Paris, September 10, 2014) was featured in the French Newspaper *Le Monde* on September 22, 2014 see: [http://www.lemonde.fr/sciences/article/2014/09/22/des-photons-pour-reveler-les-uvres-d-art\\_4492192\\_1650684.html](http://www.lemonde.fr/sciences/article/2014/09/22/des-photons-pour-reveler-les-uvres-d-art_4492192_1650684.html) ). Articles on both the Archaeopteryx and the Archimedes Palimpsest were featured in a series of art and science in in the French Newspaper *Le Monde* on August 8, 2015, see: [http://www.lemonde.fr/arts/article/2015/08/08/l-uvre-d-art-n-est-pas-celle-que-l-on-croit\\_4716980\\_1655012.html#meter\\_toastero](http://www.lemonde.fr/arts/article/2015/08/08/l-uvre-d-art-n-est-pas-celle-que-l-on-croit_4716980_1655012.html#meter_toastero) and on August 17, 2015, see: [http://www.lemonde.fr/archeologie/article/2015/08/17/l-archeopteryx-retrouve-ses-plumes\\_4727983\\_1650751.html](http://www.lemonde.fr/archeologie/article/2015/08/17/l-archeopteryx-retrouve-ses-plumes_4727983_1650751.html)  
X-ray imaging, in particular the Archimedes work was featured in 'The New Yorker' on November 9, 2015, see <http://www.newyorker.com/magazine/2015/11/16/the-invisible-library>

The work on the Archaeopteryx feather (Publication 133) was featured in a SLAC press release (see <http://www6.slac.stanford.edu/news/2013-06-11-dino-feather.aspx> ) which received wide international press coverage including the LA Times, National Geographic and the Huffington Post.

The work on the Cherubini Opera featured in Publication 121 was featured in a Stanford Press release (see <http://www6.slac.stanford.edu/news/2013-06-10-SLAC-X-rays-Resurrect-200-year-old-Opera.aspx> and <https://www.dropbox.com/s/nup39m0t6re5av7/SSRL-Opera.m4v>). It received extensive press coverage including NBC, BBC, National Geographic and countless newspapers from around the world.

Publication 113 (**Trace metals as biomarkers for Eumelanin Pigment in the Fossil Record**) has received extensive media coverage around the world including articles in the New York Times and at BBC. The publication was also chosen as one of the top 10 discoveries of the year 2011 by the French magazine “La Recherche”.

Publication 104 (**Archaeopteryx feathers and bone chemistry fully revealed via synchrotron imaging**, *PNAS*, **107**, (20) 9060-9065 (2010)) has received worldwide press coverage including BBC News, New Scientist and The Hindu. It is also featured in a six part series of National Geographic which is aired worldwide starting in February 2011 and in the US in the fall of 2011. Three examples of the numerous links links:  
BBC News (Science & Environment) <http://www.bbc.co.uk/news/10106530>  
SPIEGEL online (<http://www.spiegel.de/wissenschaft/natur/0,1518,694170,00.html> )  
<http://www.ivanhoe.com/science/story/2011/02/822a.html> (short video on Archimedes and Archaeopteryx work)  
<http://www.soci.org/Chemistry-and-Industry/CnI-Data/2012/10/Chemical-ghosts>

Publication 86 (Pushkar, et al. *JBC*, 282, 7198, 2007) was the cover article and chosen as paper of the week by the Journal of Biological Chemistry.

Publication 57 (Wernet et al, *Science*, 304, 995, 2004) was featured in numerous Journals and Magazines around the world. Most notably it was chosen by Science Magazine as one of the top ten breakthroughs of the year 2004 (*Science*, 306, 2013-2017, 2004).

Publication 54 (Bergmann et al, *JACS*, 125, 4016, 2003) was featured in the Highlight Report 2004 of the Advanced Photon Source.

Publication 31 (Bergmann et al, *JACS*, 121, 4926, 1999) was featured in the news of the week in the publication of the American Chemical Society ‘Chemical and Engineering News’, on May 24, 1999.

The original Archimedes project (see also publications 88, 92, 115, 116) received an enormous amount of national and international press coverage. First, after the initial results in May 2005 and then again after the third experimental run in August 2006. The coverage was continuing for several years. Both magazines *Nature* (*News@Nature* May 16, 2005, and *Nature*, 435, 257, 2005) and *Science* (*Science*, 313, 744, 2006) have reported on the project, as well as many leading news journals as well as TV and radio news stations in the United States and around the world. On August 2, 2006, the Archimedes x-ray project was the most e-mailed news story on the BBC News website. On August 3, it was listed as the most popular story of the previous five days. A small list of the 2006 press coverage as compiled on August 11 by Brad Plummer from SLAC communications follows:

## **ARCHIMEDES at SLAC**

**PRESS SUMMARY as of 8/11/06**

**The Archimedes experiment at SSRL has attracted worldwide interest, generating extensive press coverage. What follows is a collection of links tracked by the SLAC communications group that were found by 8/11/06 – there were countless more.**

### **TELEVISION:**

ABC News: <http://abclocal.go.com/kgo/story?section=local&id=4426310> (Nationwide)

Fox News: <http://www.ktvu.com/video/9620190/index.html>

NBC News: <http://www.nbc11.com/news/4532852/detail.html> (text only)

CBC

Reuters TV

History Channel

### **RADIO:**

NPR: <http://www.npr.org/templates/story/story.php?storyId=5583668>  
KESQ News: <http://www.kesq.com/Global/story.asp?S=5242922&nav=9qrx>  
WBBM 780 <http://www.wbbm780.com/pages/64747.php>

#### INTERNATIONAL PRESS:

***X-rays Reveal Archimedes Secrets, Jonathan Fildes, BBC News***

<http://news.bbc.co.uk/2/hi/science/nature/5235894.stm>

This story was the most popular story on the BBC site, on Thursday it was listed as the most popular story of the past five days – though only live for two days.

***Eureka! Ancient Works by Archimedes Rediscovered, Geneviève Roberts, The Independent***

<http://news.independent.co.uk/europe/article1211357.ece>

Also published in the following:

Irish Independent [http://www.unison.ie/irish\\_independent/stories.php3?ca=27&si=1664165&issue\\_id=14442](http://www.unison.ie/irish_independent/stories.php3?ca=27&si=1664165&issue_id=14442)

Unison.ie: <http://www.unison.ie/stories.php3?ca=27&si=1664165>

***Eureka! X-ray Vision Helps Decipher Archimedes's Words of Wisdom, Roger Highfield, The Daily Telegraph***

<http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2006/08/03/warchi03.xml>

Also published in the New York Sun: <http://www.nysun.com/article/37237>

***X-Rays Illuminate Archimedes Writings, United Press International***

<http://www.upi.com/NewsTrack/view.php?StoryID=20060803-022947-3612r>

Though headquartered in the US, UPI's article was found at the following international sites:

DailyIndia.com: <http://www.dailyindia.com/show/48286.php/X-rays-illuminate-Archimedes-writings>,

<http://www.dailyindia.com/show/48303.php/UPI-NewsTrack-Health-and-Science-News>

North Korea Times: <http://story.northkoreatimes.com/p.x/ct/9/cid/dd8845aa60952db2/id/6b975c4a68934a02/>

In addition, it can be found here:

Monsters and Critics (US):

[http://science.monstersandcritics.com/news/article\\_1186808.php/Health\\_and\\_Science\\_News\\_Roundup](http://science.monstersandcritics.com/news/article_1186808.php/Health_and_Science_News_Roundup)

Political Gateway (US): <http://www.politicalgateway.com/news/read/28466>

St. Tammany.com: <http://www.sttammany.com/news-detail/article/564/upi-newstrac-4ae22ea538.html>

***Rayos X para Arquímedes, Helena Cebrian, El País***

[http://www.elpais.es/articulo/sociedad/Rayos/X/Arquimedes/elpporsoc/20060730elpepisoc\\_8/Tes/](http://www.elpais.es/articulo/sociedad/Rayos/X/Arquimedes/elpporsoc/20060730elpepisoc_8/Tes/)

***El Mundo*** link to follow.

#### LOCAL/NATIONAL PRESS:

Terence Chea's article for the Associated Press was published last Friday to a variety of national and international news sources:

##### National

USA Today: [http://www.usatoday.com/news/nation/2006-08-04-manuscript\\_x.htm](http://www.usatoday.com/news/nation/2006-08-04-manuscript_x.htm)

ABC News <http://abcnews.go.com/Technology/wireStory?id=2276486> ,  
<http://abcnews.go.com/Technology/wireStory?id=2276207> ,  
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Salon.com: <http://www.salon.com/wire/ap/archive.html?wire=D8JA3LE80.html>  
CBS News: <http://www.cbsnews.com/stories/2006/08/05/ap/tech/mainD8J9VSVG3.shtml>  
Fox News: <http://www.foxnews.com/story/0,2933,207292,00.html>  
KLTV ABC7: <http://www.kltv.com/Global/story.asp?S=5249125>  
KESQ News: <http://www.kesq.com/Global/story.asp?S=5242922&nav=9qrx>  
WBBM 780 <http://www.wbbm780.com/pages/64747.php>  
Yahoo News: [http://news.yahoo.com/s/ap/20060805/ap\\_on\\_sc/archimedes\\_manuscript](http://news.yahoo.com/s/ap/20060805/ap_on_sc/archimedes_manuscript)  
AOL News: [http://articles.news.aol.com/news/\\_a/particle-acceleratorreveals-archimedes/20060804231409990001?cid=2194](http://articles.news.aol.com/news/_a/particle-acceleratorreveals-archimedes/20060804231409990001?cid=2194)  
MSNBC: <http://www.msnbc.msn.com/id/14226275/>  
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Washington Post: <http://www.washingtonpost.com/wp-dyn/content/article/2006/08/04/AR2006080401468.html>  
Wired News: [http://www.wired.com/news/wireservice/0,71546-0.html?tw=wn\\_culture\\_1](http://www.wired.com/news/wireservice/0,71546-0.html?tw=wn_culture_1)  
The Examiner: [http://www.examiner.com/a-205125~Beams\\_Reveal\\_Archimedes\\_Hidden\\_Writings.html](http://www.examiner.com/a-205125~Beams_Reveal_Archimedes_Hidden_Writings.html)  
Forbes: <http://www.forbes.com/business/energy/feeds/ap/2006/08/04/ap2929089.html> Silicon Valley.com:  
<http://www.siliconvalley.com/mld/siliconvalley/news/15202438.htm>  
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The Desert Sun: <http://www.thedesertsun.com/apps/pbcs.dll/article?AID=/20060805/NEWS10/608050325/1024>  
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Tribune Star:  
[http://www.tribstar.com/news/feeds/apcontent/apstories/apstorysection/D8J9V9QO1.xml.txt/resources\\_apstoryview](http://www.tribstar.com/news/feeds/apcontent/apstories/apstorysection/D8J9V9QO1.xml.txt/resources_apstoryview)  
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The Tribune-Democrat: [http://www.tribune-democrat.com/feeds/apcontent/apstories/apstorysection/D8J9V9QO1.xml.txt/resources\\_apstoryview](http://www.tribune-democrat.com/feeds/apcontent/apstories/apstorysection/D8J9V9QO1.xml.txt/resources_apstoryview)  
The Ledger: <http://www.theledger.com/apps/pbcs.dll/article?AID=/20060804/APA/608040969>  
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[http://www.normantranscript.com/feeds/apcontent/apstories/apstorysection/D8J9V9QO1.xml.txt/resources\\_apstoryview](http://www.normantranscript.com/feeds/apcontent/apstories/apstorysection/D8J9V9QO1.xml.txt/resources_apstoryview)  
Seattle Times: [http://seattletimes.nwsource.com/html/nationworld/2003178643\\_script06.html](http://seattletimes.nwsource.com/html/nationworld/2003178643_script06.html)

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Chron.com: <http://www.chron.com/disp/story.mpl/ap/science/4095917.html>  
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## International

Taipei Times: <http://www.taipetimes.com/News/world/archives/2006/08/06/2003322064>  
Zante Web (UK): <http://www.zanteweb.co.uk/zante-greece-news/250/greece-x-rays-reveal-defaced-genius-of-archimedes.php>  
Turkish Daily News: <http://www.turkishdailynews.com.tr/article.php?enewsid=50850>  
The China Post: [http://www.chinapost.com.tw/i\\_latestdetail.asp?id=40156](http://www.chinapost.com.tw/i_latestdetail.asp?id=40156)  
CTV.ca: [http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20060805/archimedes\\_060805/20060805?hub=SciTech](http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20060805/archimedes_060805/20060805?hub=SciTech)  
Canada East.com: <http://www.canadaeast.com/cp/science/article.php?articleID=30324>  
Gulf Daily News (Bahrain): <http://www.gulf-daily-news.com/Story.asp?Article=151816&Sn=WORL&IssueID=29139>  
FAZ-Frankfurter Allgemeine: <http://www.faz.net/s/Rub163D8A6908014952B0FB3DB178F372D4/Doc~EC57157EDF531409A9007948CC13CD9F7~ATpl~Ecommon~Scontent.html>  
News24.com (South Africa): [http://www.news24.com/News24/Technology/News/0,,2-13-1443\\_1978530.00.html](http://www.news24.com/News24/Technology/News/0,,2-13-1443_1978530.00.html)

***Prayer Book Reveals Secrets, Ian Hoffman, San Mateo County Times***  
[http://www.insidebayarea.com/sanmateocountytimes/localnews/ci\\_4124688](http://www.insidebayarea.com/sanmateocountytimes/localnews/ci_4124688)

The article can also be found here:

Mercury Register: [http://www.oroVILLEmr.com/news/bayarea/ci\\_4124752](http://www.oroVILLEmr.com/news/bayarea/ci_4124752)  
Inside Bay Area: [http://www.insidebayarea.com/localnews/ci\\_4124752](http://www.insidebayarea.com/localnews/ci_4124752),  
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Oakland Tribune: [http://www.insidebayarea.com/oaklandtribune/ci\\_4124752](http://www.insidebayarea.com/oaklandtribune/ci_4124752)  
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***Revealing Secrets of Archimedes, Lisa Krieger, San Jose Mercury News***  
<http://www.mercurynews.com/mld/mercurynews/living/15187435.htm>

The article was the top feature on the *Mercury News* home page, the top story on the online News page and was the front cover story of the Peninsula section of the *San Jose Mercury's* print edition.

The article can be found on the following sites:

Silicon Valley: <http://www.siliconvalley.com/mld/siliconvalley/news/15188980.htm>  
Kentucky.com: <http://www.kentucky.com/mld/kentucky/news/nation/15190137.htm>  
The State (SC): <http://www.thestate.com/mld/thestate/news/nation/15190137.htm>  
Monterey County Herald: <http://www.montereyherald.com/mld/montereyherald/news/nation/15190137.htm>  
Pioneer Press: <http://www.twincities.com/mld/twincities/news/15190137.htm>

Biloxi Sun Herald: <http://www.sunherald.com/mld/sunherald/news/nation/15190137.htm>  
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Myrtle Beach Sun News: <http://www.myrtlebeachonline.com/mld/myrtlebeachonline/news/nation/15190137.htm>  
Macon Telegraph: <http://www.macon.com/mld/macon/news/nation/15190137.htm>  
Bradenton Herald: <http://www.bradenton.com/mld/bradenton/news/nation/15190137.htm>  
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This week, it was (re)published to these sites:

News Tribune: <http://www.thenewstribune.com/24hour/healthscience/story/3346437p-12321876c.html>  
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Bradenton Herald: <http://www.bradenton.com/mld/bradenton/news/nation/15224167.htm>  
Duluth News Tribune: <http://www.duluthsuperior.com/mld/duluthsuperior/news/nation/15224167.htm>  
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***High Tech Tool Reveals Essays of Archimedes, Keay Davidson, San Francisco Chronicle***  
<http://www.sfgate.com/cgi-bin/article.cgi?file=/c/a/2006/08/03/MNGSRKADVL1.DTL>

This article was also published at the following sites:

Kitsap Sun: [http://www.kitsapsun.com/bsun/bu\\_technology/article/0,2403,BSUN\\_19061\\_4891006,00.html](http://www.kitsapsun.com/bsun/bu_technology/article/0,2403,BSUN_19061_4891006,00.html)  
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Fort Wayne.com: <http://www.fortwayne.com/mld/journalgazette/news/nation/15194812.htm>

***San Francisco Chronicle*** writer Robert Selna's article on the Exploratorium's live webcast at SSRL, *Ancient past via Webcast: Stanford researchers unveil Archimedes' writings on Internet* was published on *SFGate.com* August 5. To view the feature in its entirety please follow this link: <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2006/08/05/ARCHIMEDES.TMP>.

***Archimedes' Secrets Revealed by Atom Smasher, Davide Castelvecchi, National Geographic Online***  
<http://news.nationalgeographic.com/news/2006/08/060803-archimedes.html>

***Slashback: Archimedes Gets a Webcast, Slashdot***  
<http://yro.slashdot.org/yro/06/08/02/2231252.shtml>

Slashdot made further mention this week of the experiment:  
<http://science.slashdot.org/article.pl?sid=06/08/05/1243256>

***Decoding Archimedes Text, Dennis O'Brian, The Baltimore Sun***

<http://www.baltimoresun.com/news/health/bal-hs.briefs04baug04.0.3015902.story?coll=bal-health-headlines>

***X-Rays Used To Read Hidden Ancient Text, Josephine Roque, All Headline News***

<http://www.allheadlinenews.com/articles/7004428047>

***The Archimedes Palimpsest, James Randi, Swift***

<http://www.randi.org/jr/2006-07/072806academic.html#i3>

The *EETimes* published *SLAC Deciphers Archimedes' Code*:

<http://www.eetimes.com/news/semi/showArticle.jhtml?articleID=191800682>.

Jennifer Viegas' article *Archimedes Text Revealed by X-ray* was posted on the *Discovery Channel's* News website August 4. To view the full text, follow this link:

[http://dsc.discovery.com/news/2006/08/04/archimedes\\_his.html?category=history&guid=20060804140030](http://dsc.discovery.com/news/2006/08/04/archimedes_his.html?category=history&guid=20060804140030).

The article also appeared on *ABC* (Australia) at <http://www.abc.net.au/science/news/stories/s1707926.htm>.

Robert Service's article for *Science* magazine's News of the Week section on SSRL's Archimedes research was published in the August 11 issue of the publication. <http://www.sciencemag.org/cgi/content/full/313/5788/744>

SLAC's Bradley Plummer wrote an extensive feature on the Archimedes experiment at SSRL which was published on the front cover of the *Stanford Report* which was published August 10. To view the article, please click the following link: <http://news-service.stanford.edu/news/2006/august9/arch-080906.html>.