Ronald .E. Cohen
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Invited Talks

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3. Structure, elasticity, & equations of state of oxide minerals, II. Density Functional Theory: Electronic Structure & Total Energy, III. The Potential Induced Breathing Model: Statics, Lattice Dynamics, Elasticity, IV. The Linearized Augmented Plane Wave (LAPW) Method: Accurate Calculation within the Local Density Approximation, R.E. Cohen, Quantum Mechanics Applied to the Earth Science, U. of Calif., Los Angeles, CA 17-19 February 1988.
4. Computer Simulations of Silicates and Oxides at High Pressures Temperatures, R.J. Hemley, and R.E. Cohen, 28th International Geological Congress, Washington, DC, 9-19 July 1989.
5. Applicability of Conventional Band Theory and the Role of Phonons in High T_c Superconductors, R.E. Cohen, D. Singh, W.E. Pickett, D.A. Papaconstantopoulos, H. Krakauer, and P.B. Allen, Workshop on the Materials Science of High Temperatures Superconductors, NIST, Gaithersburg, MD, Nov., 1988.
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8. Electronic Structure of the Metallic State of Copper Oxide Superconducting Materials, W.E.Pickett, R.E. Cohen, D. Singh, D.A. Papaconstantopoulos, H. Krakauer, Conference on Superconductivity and Applications, Buffalo, NY, 19-21 September 1989.
9. Computational Mineral Physics -- Present and Future, R.E. Cohen, Geophysical Laboratory, Wash, DC, 23 January 1990.
10. Linearized Augmented Plane Wave (LAPW) Calculations for Ferroelectric $BaTiO_3$, R.E. Cohen, H. Krakauer, First Williamsburg Workshop on First Principles Calculations for Ferroelectrics , Williamsburg, VA, 5-6 February 1990.
11. Theoretical Determination of Strong Electron-Phonon Coupling and Anharmonicity in $YBa_2Cu_3O_7$, R.E. Cohen, ONR, London, England, 30 March 1990.
12. Theoretical Determination of Strong Electron-Phonon Coupling and Anharmonicity in $YBa_2Cu_3O_7$, R.E. Cohen, Daresbury Lab., Warrington, England, 6 April 1990.
13. First-Principles Lattice Dynamics of Ferroelectrics: Linearized Augmented Plane Wave Calculations for $BaTiO_3$, R.E. Cohen, University College of London, England, 2 April 1990.
14. Bonding, Thermoelasticity, and Phase Transitions at High Pressures, R.E. Cohen, Dept. of Earth Sciences, Cambridge Univ., England, 4 April 1990.
15. Bonding and elasticity of stishovite SiO_2 at high pressures: Linearized Plane Wave calculations, R.E. Cohen, Amer. Geophysical Union 1990 Meeting, Baltimore, MD, 27 May - 1st June 1990.
16. Lattice statics, dynamics, and electron-phonon coupling: First principles calculations for La_2CuO_4 and $YBa_2Cu_3O_7$, W. E. Pickett, H. Krakauer, and R. E. Cohen, Intl. Seminar on the Theory of High Temperature Superconductors, Dubna, USSR, July 1990.
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24. Electronic structure studies of the differences in ferroelectric behavior of $BaTiO_3$ and $PbTiO_3$, R. E. Cohen and H. Krakauer, Second Williamsburg Workshop on First-Principles Calculations for Ferroelectricity, Williamsburg, VA, Feb. 2-4, 1992.
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29. First-principles Phonon Calculations for Ferroelectrics and High Tc Superconductors, R.E. Cohen, Institute for Materials Research, Tohoku University, Sendai, Japan, Aug. 31, 1992.
30. First-principles Phonon Calculations for Ferroelectrics and High T_c Superconductors, R.E. Cohen, Institute for Solid State Physics, University of Tokyo, Japan, Sept. 2, 1992.
31. Theoretical studies of ferrous iron compounds at high pressure, R.E. Cohen, The Second Ironworkers Convention, AIRAPT International Congress, June 1993.
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33. First-Principles Studies Of Minerals And Melts At High Pressures And Temperatures, Georgia Institute of Technology, April 8, 1993.
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37. From Electrons to the Earth: First-principles Studies of Earth Materials, Harvard University, Dept. Earth Planetary Sciences, November 1, 1993.
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44. Iron at core conditions, CSEDI conference, Whistler Mountain B.C., 1994.
45. First principles frozen phonon studies of $LiTaO_3$ and $LiNbO_3$, Third Williamsburg Workshop on First-Principles Calculations for Ferroelectricity, Williamsburg, VA, Feb 6-9, 1994.
46. What does theory teach us about oxide ferroelectrics and ferroelectricity?, Third Williamsburg Workshop on Fundamental Experiments in Ferroelectrics, Williamsburg, VA, Feb. 5-8, 1995.
47. Electrons and the Deep Earth, University of New York at Stony Brook, Earth and Space Sciences, November 16, 1994.
48. The Computer as a Window into Dynamical Properties of Earth Materials, AGU, May 30-31, 1995.
49. Density Functional Theory: New Windows Into Planetary Interiors: L.Stixrude, R.E. Cohen, May 30-31, 1995.
50. The Computer as a Window into Materials, Northern Virginia Community College, April 6, 1995.
51. The Computer as a Window into Materials, University of Pennsylvania, April 25, 1995.
52. Dynamical Properties of Earth Materials at High Pressures, Goldschmidt Conference, Penn. State Univ. May 24, 1995.
53. First-principles Studies of Iron in Mantle Minerals at Lowermost Mantle Conditions, IUGG, July 7, 1995.
54. High-Pressure Effects on Thermal Properties of MgO, I. Inbar and R.E. Cohen, IUGG, July 3, 1995.
55. Fundamental properties of Iron at High Pressures and the Earth's Core, Fermilab, Colloquium, June 7, 1995.
56. First-principles studies of Ferroelectrics, Univ. Cambridge, Cavendish Laboratory, October 24, 1995.
57. The Computer as a Window into the Earth, University College London, October 1995.
58. The Computer as a Window into the Earth, Oxford University, Earth Science, October, 1995.
59. The Computer Cell: First-principles High Pressure Physics, Materials Science, Oxford University, October 1995.

60. Molecular Dynamics Simulations of MgO at Extreme Pressures and Temperatures, AGU Fall Meeting, San Francisco, CA, December 1995.
61. Comparison of the High Pressure-Behavior of FeO and NiO: I I Mazin, AGU Fall Meeting, San Francisco, CA, December 1995.
62. Surface effects in Ferroelectrics: Periodic slab Computations for $BaTiO_3$, Fourth Williamsburg Workshop on First-principles Calculations for Ferroelectrics, Williamsburg, VA, Feb. 1996.
63. Iron in the Earth's Core and Lower Mantle--From First Principles, Department of Earth Science, Washington University, St. Louis, May 9, 1996.
64. First-principles studies of Ferroelectric and Ferroelastic phase transitions, Phase Transitions Gordon Conference, June 1996.
65. First-principles studies of phase transitions and physical properties of solids, Australian National University, Canberra, AU, July, 1996.
66. Molecular dynamics studies of thermal properties and phase transitions in oxides and iron with implications for the Earth, Australian National University, Canberra, AU, July, 1996.
67. First-principles studies of Fe under Core conditions, SEDI/Western Pacific Geophysics Meeting, July, 1996, Brisbane, Australia.
68. Theoretical studies of geophysically important oxides and silicates at high pressures, SEDI/Western Pacific Geophysics Meeting, July 1996, Brisbane, Australia.
69. Iron at ultra-high pressures and temperatures and the Earth's core, Georgetown University, Washington, D.C., Sept. 19, 1996.
70. Saghi-Szabo, G., and R. E. Cohen (1996) Long-Range Order Effects in Pb(Zr1/2Ti1/2)O3, Fourth Williamsburg Workshop on First Principles Calculations for Ferroelectrics, Williamsburg, VA.
71. First-principles studies of oxide ferroelectrics, MRS, December 2 - 5, 1996, Boston.
72. Properties of Crystals and Liquids at High Pressures from First-principles, Joint AIRAPT-16 & HPCJ-38, Kyoto, Aug. 25-29, 1997.
73. First-principles studies of electronic structure, ordering, piezoelectricity in ferroelectrics, with G. Saghi-Szabo and H. Krakauer, Piezoelectric Crystal Planning Workshop,Dullas Airport, VA, ., Mar 13-16, 1997.
74. Chemical ordering and ferroelectricity in lead zirconate titanate, G. Saghi-Szabo and R. Cohen, Piezoelectric Crystal Planning Workshop,Dullas Airport, VA, ., Mar 13-16, 1997.
75. Cohen, R. E., and G. Saghi-Szabo (1997) First-Principles Studies of Ordering, Phase Separation, Electronic Structure, and Piezoelectricity in PZT, 1997 Williamsburg Workshop on Ferroelectrics, Williamsburg, VA.
76. Saghi-Szabo, G., R. E. Cohen, and H. Krakauer (1997) Piezoelectric Properties of Tetragonal PbTiO3, CECAM Workshop on Ferroelectrics, Lyon, France
77. Saghi-Szabo, G., R. E. Cohen (1997) First Principles Density Functional Studies of Ferroelectric and Piezoelectric Properties of Solids, University of Maryland Chemical Physics Seminar Series, College Park, MD.
78. Saghi-Szabo, G., R. E. Cohen (1997) Ordering, Phase Separation, Electronic Structure, and Piezoelectricity in Ferroelectrics, Geophysical Laboratory Seminar Series, Carnegie Institution of Washington, Washington, DC.
79. Magnetic collapse in transition metal oxides at high pressures, Aspen Center for Physics, Aspen, CO, June, 1997.

80. Phase transitions and properties of phases in the MgO-CaO-SiO_2 system at high pressures, CECAM workshop on Simulation of silicas: from classical pair potentials to density functional theory, Lyon, France, Sept. 15-17, 1997.
81. First-principles studies of piezoelectricity in oxide ferroelectrics, ISSP, University of Tokyo, Tokyo, Japan, August 22, 1997.
82. Magnetic collapse and the behavior of transition metal oxides at high pressures, MRS, Boston, Dec. 1-5, 1997.
83. Transition Metal Oxides at High Pressures: Magnetic Collapse and Structural Phase Transitions, NIST, January 29, 1998.
84. Transition metal and other oxides at high pressures: Magnetic and structural phase transitions, Univ. California, Davis, Materials Research Institute, Feb. 26, 1998.
85. Transition metal and other oxides at high pressures: Magnetic and structural phase transitions, Lawrence Livermore National Laboratory, Feb. 25, 1998.
86. Transition metal and other oxides at high pressures: Magnetic and structural phase transitions, Institute for Solid State Physics, Univ. of Tokyo, Tokyo, March 24, 1998.
87. Transition metal and other oxides at high pressures: Magnetic and structural phase transitions, National Research Institute for Metals, Tsukuba, Japan, March 25, 1998.
88. Transition metal and other oxides at high pressures: Magnetic and structural phase transitions, Joint Research Center for Atomic Technology, Tsukuba, Japan, March 26, 1998.
89. A new tight binding model and iron at high pressures, Joint Research Center for Atomic Technology, Tsukuba, Japan, March 26, 1998.
90. First-principles studies of Ferroelectrics, George Mason University, VA, April 13, 1998.
91. First-principles computations of piezoelectricity in ferroelectrics, ONR Transducer Materials and Transducers Workshop, Penn State, May, 1998.
92. Electronic structure and bonding in minerals, 3 talks at NATO ASI on in Microscopic Properties and Processes in Minerals, Il Ciocco, Italy, Sept. 6-18, 1998.
93. Theory of ferroelectrics: A vision for the next decade and beyond, '99 Williamsburg Conference on Ferroelectrics, Williamsburg, VA, Jan. 31-Feb. 3, 1999.
94. Possible Phase Transitions and Compositional Changes at the Base of the Mantle, AGU, Spring meeting, Boston, MA, June 1-3, 1999.
95. Electroceramics by design, Office of Naval Research Workshop on Naval Materials by Design, January 6, 2000.
96. First-principles theory of piezoelectricity in ferroelectrics, American Physical Society, March 2000.
97. Theory of Piezoelectricity in Ferroelectrics, Aspen Center for Physics Winter Workshop on Fundamental Physics of Ferroelectrics, Feb. 13-20, 2000.
98. First-principles theory of piezoelectricity in ferroelectrics, American Physics Society March Meeting, Minneapolis, MN, March 23, 2000, Bull. Am. Phys. Soc., 45, 743, 2000.
99. First-principles Properties of Deep Earth Materials, University of Illinois at Urbana-Champaign, Geology Dept., April 5, 2000.
100. First-principles computations of piezoelectricity: Polarization rotation mechanism in single-crystal piezoelectrics, R.E. Cohen and H. Fu, U.S. Navy Workshop on Acoustic Transuction Materials and Devices, Penn State Univ. April 11, 2000.
101. FeO and CoO at high pressures: LDA+U computations, ESCM2000: Electronic Structure and Magnetism in Complex Materials, July 26-28, 2000, Georgetown University, Washington, D.C.

102. Properties of iron at Earth core conditions, Seimological Laboratory, California Institute of Technology, August 11, 2000, Pasadena, CA.
103. Fundamental physics of piezoelectricity and polarization rotation in ferroelectrics, Materials Research Laboratory seminar, Nov. 1, 2000.
104. Behavior of earth materials from fundamental physics, Geophysical and Planetary Sciences Division seminar, California Institute of Technology, Nov. 20, 2001.
105. Thermoelasticity and equations of state of metals at high pressures and temperatures, Univ. Calif. Davis, Nov. 30, 2000.
106. Phase stability, equations of state, and elasticity of Fe at high pressures, Geophysical Laboratory, Dec. 5, 2000.
107. Towards an understanding of Earth's mantle and core materials from first-principles, Dept. of Earth and Space Sciences, UCLA, Jan. 9, 2001.
108. Accuracy of thermal equation of state formulations and first-principles elasticity, Experimental Geophysics Group, Capra Ranch, Caltech, Jan. 7, 2001.
109. Towards an understanding of Earth's mantle and core materials from first-principles, at Physics at High Pressures: Interiors of Giant Planets, Extrasolar Planets and Brown Dwarfs, Institute for Theoretical Physics, Santa Barbara, January 8 - 26, 2001 Coordinators: N. Ashcroft, T. Guillot, R. Jeanloz, & D. Stevenson.
110. The base of the mantle: Possible phase transitions and FeO and CoO at high pressures: LDA+U computations, at Physics at High Pressures: Interiors of Giant Planets, Extrasolar Planets and Brown Dwarfs,
Institute for Theoretical Physics, Santa Barbara, January 8 - 26, 2001 Coordinators: N. Ashcroft, T. Guillot, R. Jeanloz, & D. Stevenson.
111. Polarization rotation mechanism for ultrahigh piezoelectric response, American Physical Society Invited Symposium: New Aspects of the Physics of Piezoelectricity, Seattle, WA March 13, 2001.
112. Towards an understanding of Earth's mantle and core materials from first-principles, IGPP, Scripps Oceanographic Institute, San Diego, CA, March 16, 2001.
113. Behavior of Earth Materials from Fundamental Physics, Department of Earth & Planetary Sciences, John Hopkins University, March 26, 2001.
114. Fundamental physics of electromechanical coupling in oxide ferroelectrics, Chemical Physics seminar, UCLA, April 23, 2001.
115. First-principles design of piezoelectric materials for transducers, AMTIAC (Advanced Materials and Processes Technology) Computational Materials Science Workshop, St. Louis, April 24, 2001.
116. Polarization rotation, elastic, and electromechanical response of piezoelectrics, US Navy Transducer Workshop, Baltimore, MD, May 16, 2001.
117. Thermoelasticity of metals at high pressures and temperatures, Solid Mechanics Seminar, Caltech, June 7, 2001.
118. Computational Mineral Physics, AGU Spring meeting, Boston, May 30, 2001.
119. Constraints on Lower Mantle Compositions Using Molecular Dynamic Simulations of $MgSiO_3$ Perovskite, Marton, F C, Cohen, R E, AGU Spring meeting, Boston, May 30, 2001.
120. Metals at High Pressures and Temperatures, Division of Computational Physics, American Physical Society, Boston, MA, June 25-28, 2001.

121. Importance of Magnetism in Phase Stability, Equations of State, and Elasticity, International School of Physics "Enrico Fermi" , CXLVI course, High Pressure Phenomena , 3 - 13 July, Varenna, Italy 2001.
122. Equations of State and Elasticity, International School of Physics "Enrico Fermi", CXLVI course, High Pressure Penomena , 3 - 13 July, Varenna, Italy 2001.
123. Magnetism at high pressures, CECAM/Psi-k Workshop, Application of First-Principle Methods in Geophysics, Lyon, France 16-20 July 2001.
124. The $CaCl_2$ transition in stishovite, AGU fall meeting, Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract T22E-05, 2001.
125. Inner core elasticity and temperature from first principles, G. Steinle-Neumann, L. Stixrude, and R.E. Cohen, , Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract U42B-04, 2001.
126. Towards an understanding of Earth's mantle and core materials from first-principles, University of Chicago, January 16, 2002.
127. First-principles studies of ferroelectrics, ONR Workshop on Ferroelectric-Semiconductor Interfaces, Kona, Hawaii, April 7-11, 2002.
128. First-principles calculations: from double wells to giant piezoelectric response, DARPA/ONR First Principles Design of Materials Kickoff Meeting and Workshop, May 9-10, 2002, Arlington, VA USA.
129. Towards an understanding of Earth's mantle materials from first-principles, University of Michigan, October 1, 2002.
130. Towards accurate first-principles simulations of large strain piezoelectric transducer materials, Fundamental Physics of Ferroelectrics 2003, Williamsburg, VA, February 3, 2003.
131. Magnetism and elasticity in Iron as functions of pressure, Hebrew University, Racah Institute for Physics, March 17, 2003.
132. Towards Computational Design of Transducer Materials, 2003 U.S. Navy Workshop on Acoustic Transduction Materials and Devices Penn. State Univ. May 8, 2003.
133. First-principles simulations of large strain piezoelectric transducer materials, 10th European Meeting on Ferroelectricity 2003, Monday, Aug 4, 2003.
134. First-principles Multiscale Modeling of Earth Materials Properties, Frontiers in Theoretical Earth Sciences, CMG2004, Columbia University, New York, June 15-18, 2004.
135. First-principles simulations of relaxor ferroelectrics, Future Directions in Materials for Electromechanical Transducers, Arlington, VA, July 12-13, 2004.
136. Theory of polarization rotation in relaxor ferroelectrics, The 20th General Conference of the Condensed Matter Division of the European Physical Society, Prague July 19-23, 2004.
137. First-principles Multiscale Modeling of Relaxor Ferroelectrics, Hebrew University, Dept. Physics, July 29, 2004.
138. First-principles Multiscale Modeling of Earth Materials Properties, Hebrew University, Dept. Geology, July 29, 2004.
139. First-principles Multiscale Modeling of Relaxor Ferroelectrics, Technion, Haifa, Dept. Mechanical Engineering, July 29, 2004.
140. Thermal equation of state of Fe and V: linear response quasiharmonic lattice dynamics, California Institute of Technology's ASC Center for Simulation of Dynamic Response of Materials, Site Review, October, 2004.

141. Polarization Rotation and Domain Contributions to Large Electromechanical Coupling in Relaxor Ferroelectrics, 2005 U.S. Navy Workshop on Acoustic Transduction Materials and Devices, May 12, 2005, Penn State.
142. Thermoelasticity of iron from first-principles, Ronald Cohen and Xianwei Sha, Lawrence Livermore National Laboratory, ASC Road Show, May 16, 2005.
143. Polarization Rotation in Relaxor Ferroelectrics, 12th US-Japan Seminar on Dielectric and Piezoelectric Ceramics, November 6–9, 2005, Marriott Waterfront Hotel, Annapolis, Maryland.
144. Polarization Rotation and Domain Contributions to Large Electromechanical Coupling in Relaxor Ferroelectrics, 11th International Meeting on Ferroelectricity, IMF11, Iguassu Falls Brazil/Argentina, September 4-9, 2005.
145. Origin of large electromechanical coupling in relaxor ferroelectrics, George Washington University, Department of Mechanical and Aerospace Engineering and Department of Chemistry seminar, Nov. 15, 2005.
146. Theory of Iron at High Pressure and Temperature, Workshop on Synergy of 21st Century High-Pressure Science and Technology Advanced Photon Source, Argonne National Laboratory, Argonne, Illinois USA
May 1, 2006.
147. Origin of Large Response in High Electromechanical Coupling Transducer Materials, 2006 U.S. Navy Workshop on Acoustic Transduction Materials and Devices, Penn. State University, State College, PA, May 9, 2006.
148. Theory of Iron at High Pressure and Temperature, Conference on Mathematical Geophysics, Sea of Gallilee, Israel, June 4-8, 2006.
149. Theory of Iron at High Pressure and Temperature, CECAM workshop on Mineral Physics with Computation and Experiment, Lyon, France, June 19-23, 2006.
150. Origin of large response in high electromechanical coupling transducer materials, COE21, Waseda University, Tokyo, Japan, Sept. 6, 2006.
151. Polarization rotation in relaxor ferroelectrics, Department of Physics, University of Tokyo, Hongo Campus, Japan, Sept. 11, 2006.
152. Polarization rotation in relaxor ferroelectrics, Institute for Solid State Physics ISSP, Tsukuba, Japan, Sept. 13, 2006.
153. Origin of large response in high electromechanical coupling transducer materials, Cavendish Laboratory, TCM, Cambridge, UK, October 19, 2006.
154. Multiscale Modeling of Iron at High Pressures and Temperatures, University College London, Earth Sciences Dept. London, UK, October 20, 2006.
155. Enhanced Piezoelectricity from Polarization Rotation in Perovskites, APS March meeting, Denver, CO, March 5, 2007.
156. Prediction of a pressure induced morphotropic phase boundary in PbTiO3 and the origin of giant electromechanical coupling via polarization rotation, SMEC 2007 - Study of Matter at Extreme Conditions, Miami Beach, Miami Beach, April 16, 2007
157. Theory of Minerals at High Pressures Beyond Band Theory, SMEC 2007 - Study of Matter at Extreme Conditions, Miami Beach, Miami Beach, April 18, 2007, Plenary Talk.
158. Polarization rotation in large strain piezoelectrics and new polar materials by design, UC Davis, Davis, CA, USA, May 31, 2007.
159. Quantum Monte Carlo and Dynamical Mean Field Theory for solids at high pressures, Electronic Structure Workshop, June 14, 2007, NCSU, NC, USA.

160. Polarization rotation in large strain piezoelectrics and new polar materials by design, European Meeting on Ferrroelectricity, Sept. 5, 2007, Bled, Slovenia.
161. The Future of Theoretical Mineral Physics: Beyond Band Theory, Princeton University, November 2007.
162. The Future of Theoretical Mineral Physics, Dept. Mineral Sciences, Smithsonian Institution, January 23, 2008.
163. Joint Theoretical and Experimental Studies for Developing New Transducer Materials, 2008 U.S. Navy Workshop on Acoustic Transduction Materials and Devices, Penn Stater, Conference Center Hotel in State College, Pennsylvania, May 13 – 15, 2008.
164. Ferroelectrics: Materials That Do Things—From Medical Ultrasound to Green Energy, Carnegie Institution Neighborhood Lecture Series, Washington, D.C., April 8, 2008.
165. Overview of Deep Carbon Reservoirs, Keynote Talk, Deep Carbon Cycle Workshop, Geophysical Laboratory, Broad Branch Road Campus, Washington, D.C., May 15-17, 2008.
166. Joint Theoretical and Experimental Studies for Developing New Electromechanical Materials, High Pressure Workshop, NSLS, May 21, 2008.
167. Joint Theoretical and Experimental Studies for Developing New Electromechanical Materials, 2nd International Conference on Quantum Simulators and Design (QSD2008) to be held in the National Museum of Emerging Science and Innovation (Miraikan), Tokyo, Japan, May 31-June 3, 2008.
168. Quantum Monte Carlo for Crystals under Pressure: Grand Challenge to Next-Generation Integrated Nanoscience, June 3-7, 2008, Tokyo, Japan.
169. Introduction to Modern Theory of Ferroelectrics, Waseda University, Tokyo, Sept. 17, 2008.
170. Giant Electromechanical Coupling in Relaxor Ferroelectrics, Waseda University, Tokyo, Sept. 19, 2008.
171. Theoretical and experimental studies of ferroelectrics and relaxors under pressure, Japanese Physical Society, Morioka, Japan, Sept. 21, 2008.
172. Quantum Monte Carlo and Dynamical Mean Field Theory for solids at high pressures, University of Tokyo, Sept. 18, 2008.
173. Melting at High Pressures, American Geophysical Union, San Francisco, Dec. 2008.
174. Quantum Monte Carlo Computations for Minerals at High Pressures, San Francisco, Dec. 2008.
175. Quantum Monte Carlo Simulations of Behavior of Materials at Extreme Conditions, 14th International Workshop on Computational Physics and Materials Science: Total Energy and Force Methods, ICTP, Trieste, IT, Jan. 8, 2009.
176. Theory of Minerals at High Pressures Beyond Band Theory, Universitat Muenchen, Munich, Germary, Jan. 12, 2009.
177. Theory of Minerals at High Pressures Beyond Band Theory, Bayerisches GeoInstitut, Bayreuth, Germary, Jan. 14, 2009.
178. Theoretical Studies for Developing New Electromechanical Materials, Fundamental Physics of Ferroelectrics 2009, Williamsburg, VA, Feb. 2009.
179. Navy Materials by Design: Ferroelectrics and useful polar materials, Office of Naval Research, Feb. 3, 2009.
180. Computing materials properties and Materials by Design using ABINIT, Naval Research Laboratory, Feb. 5, 2009.
181. Transducer Materials by Design, 2009 U.S. Navy Workshop, Penn State, May 14, 2009.

182. Theory of Minerals at High Pressures Beyond Band Theory, Geophysical Laboratory, May 18, 2009.
183. First-principles and Experimental Studies on Ferroelectrics and Relaxors, Rutgers University, May 21, 2009.
184. New directions in accurate predictions of high pressure mineral properties, Interior of the Earth Gordon Research Conference, Mount Holyoak, MA, June 16, 2009.
185. First-principles and Experimental Studies on Ferroelectrics and Relaxors, Universitè Geneve, June 18, 2009.
186. Properties of minerals and other things from fundamental physics: From DFT to DMFT and QMC, Goldschmidt Conference, Davos, Switzerland, June 24, 2009.
187. New directions in accurate predictions of high pressure mineral properties, Universitat Frankfurt, Frankfurt, Germany, June 30, 2009.
188. First-principles and Experimental Studies on Ferroelectrics and Relaxors, Universitat Hamburg, Hamburg, Germany, July 1, 2009.
189. New directions in accurate predictions of high pressure mineral properties, GFZ, Potsdam, Germany, July 3, 2009.
190. First-principles and Experimental Studies on Ferroelectrics and Relaxors, University of Liège, Liège, Belgium, July 6, 2009.
191. New directions in accurate predictions of high pressure mineral properties, ENS, Lyon, France, July 9, 2009.
192. New directions in accurate predictions of high pressure mineral properties, IMPMC, Universite' Pierre et Marie Curie, Paris, July 15, 2009.
193. Quantum Monte Carlo Simulations of Materials under Extreme Conditions, AIRAPT, Tokyo, Japan, July 28, 2009.
201. First-principles and Experimental Studies on Ferroelectrics and Relaxors, MRS, Boston, Dec. 3, 2009.
202. Functional Polar Materials by Design, R.E. Cohen, Q. Peng, and P. Ganesh, 2010 U.S. Navy Workshop on Acoustic Transduction Materials and Devices, Tuesday, May 11, 2010, Penn Stater Conference Center Hotel, State College, Pennsylvania, invited.
203. Active Polar Materials for Energy, ONR, August 16, 2010.
204. Origin and design of relaxor ferroelectrics from first-principles, Thomas Young Centre, London, Oct. 26, 2010.
205. Beyond Band Theory for Minerals at High Pressures, University College London, Oct. 28, 2010.
206. Elastic isotropy of iron under core conditions and other recent advances, R.E. Cohen and X. Sha, DI21C-08, AGU, San Francisco, Dec. 14, 2010.
207. Beyond Band Theory for Minerals at High Pressures, AGU, San Francisco, Dec. 16, 2010.
208. First-principles theory, statistical mechanical modeling and experiments for design of new devices exploiting coupled phase transitions, Novel Electronic Devices Based on Coupled Phase Transitions Workshop, ONR, Jan.5-6, 2011.
209. R.E. Cohen, Beyond Band Theory for Minerals and Fluids at High Pressures, Keynote, 2011 GL-GRC Inter-Institutional Symposium, Washington, D.C., Sept. 19, 2011.
210. R.E. Cohen, Metallization of FeO at High Temperatures and Pressures: DFT-DMFT Computations and Comparisons with Experiments, American Chemical Society, San Diego, March 27, 2012.

211. Metallization of FeO at high pressures and temperatures, Workshop on Novel Materials, UC Davis, June 24, 2012.
212. Ferroelectricity under applied pressure and applied electric fields, 2012 International Workshop on Acoustic Transduction Materials and Devices, May 8, 2012.
213. The electrocaloric effect under applied electric field and pressure, Drexel University, Department of Materials Science and Engineering, October 17, 2012.
214. Effects of Mn on electromechanical properties of relaxor ferroelectrics, 2013 International Workshop On Acoustic Transduction Materials And Devices May 7, 2013, Penn State Univ.
215. Properties of Iron under Core Conditions, Workshop on Elastic Properties of Iron in Extreme Conditions, 25 and 26 February, 2014, Takarazuka, Japan.
216. Effects of Mn on Electromechanical Properties of Ferroelectrics, 31th Meeting on Ferroelectric Materials and Their Applications (FMA) (http://fma.ceram.titech.ac.jp/) 28 to 31 May, 2014, Kyoto, Japan.
217. Behaviour of transition metals and transition metal oxides under pressure, and effects on transition metal dopants on ferroelectrics, Waseda University, May, 2014.
218. Importance of electron correlations in iron compounds: DFT/DMFT computations, CSEC, University of Edinburgh, May 14, 2014.
219. Behaviour of transition metals and transition metal oxides under pressure, University of Tokyo, Japan, May 23, 2014.
220. Is PPv the last mantle phase transition? PPv@10: A meeting for the 10^{th} anniversary of the discovery of post-perovskite, University of Bristol, June 26, 2014.
221. Quantum Monte Carlo simulations on silicate perovskite and other high pressure phases, Quantum Monte Carlo in the Apuan Alps IX, July 30, 2014, TTI, Vallico Sotto, Tuscany, Italy
222. Quantum Monte Carlo for Materials at High Pressures, Dept. Physics, Rutgers University, Nov 18, 2014.
223. Effects of electron correlations on iron and iron-bearing minerals in the Earth, Earth Science Institute, Hebrew University, Jerusalem, Israel, March 16, 2015.
224. Theory of large coupling ferroelectrics, Dept. of Applied Physics, Hebrew University, Jerusalem, Israel, March 19, 2015.
225. Equation of state and phase transitions of (Mg,Fe)SiO3 perovskite and post-perovskites from quantum Monte Carlo and Density Functional Theory, 2015 Joint Assembly Meeting, AGU, Montréal Québec, Canada, May 5, 2015.
226. Pressure on Correlated Materials: Transport in iron and implications for the geodynamo, and electronic transitions in iron compounds, Keynote speaker, Joint AIRAPT-25-EHPRG-53, Madrid, Spain, 2015.
227. Quantum Monte Carlo for Materials at High Pressures, Cohen, Psi-k Conference, Sept. 6-10, 2015, Donostia-San Sebastián, Spain.
228. Equations of state and phase transitions in (Mg,Fe)SiO3 perovskite and post-perovskites, position of the phase boundary and its double crossing, by Quantum Monte Carlo, AGU Fall Meeting, San Francisco, Dec 14-18, 2015.
229. Electrical conductivity in the mantle and core and implications for the geodynamo, AGU Fall Meeting, San Francisco, Dec 14-18, 2015.

230. The perovskite to post-perovskite transition and their properties from Quantum Monte Carlo, 8 January 2016, LMU, Munich, Dept. Geo- und Umweltwissenschaften, Kristallographie, Materials Seminar
231. The perovskite to post-perovskite transition and their properties from Quantum Monte Carlo, 14 January 2016, University of Edinburgh, CSEC
232. Quantum Monte Carlo simulations and applications to silicate perovskite and other high pressure phases, 31 March 2016, Physics, UCL
233. Strong Coupling Ferroelectrics, How They Work and How They Can Be Improved, Advanced Microscopy and Theoretical Calculations (AMTC5) in Nagoya, Japan, May 2016
234. Defect Dipole Enhanced Electromechanical Coupling, Shi Liu, H. Takenaka, R. Vadapoo, M. Ahart, Margo Staruch, Peter Finkel, Jun Luo, and R.E. Cohen, 2016 International Workshop on Acoustic Transduction Materials and Devices , Penn State, May 2016.
235. Strong Coupling Ferroelectrics, How They Work and How They Can Be Improved, Geophysical Laboratory Seminar Series, July 11, 2016.
236. Accurate High Pressure Behavior from Quantum Monte Carlo, LMU Physical Chemistry Colloquium, July 13, 2016.

Presentations and Abstracts (Incomplete)

1. A study of the Mokoia C3(V) carbonaceous chondrite and the origin of CAI's, R.E. Cohen, In: Lunar and Planetary Science XII, 163-165. The Lunar and Planetary Institute, Houston, TX 1981.
2. Refractory inclusions in the Mokoia C3(V) carbonaceous chondrite, R.E. Cohen, Meteoritics 16, 304 1981.
3. Phase equilibria in the MgSiO3-poor part of the Al2O3-MgSiO3-CaSiO3 plane, R.E Cohen, EOS 63, 465 1982.
4. Ideal activity in coupled solid solutions, R.E. Cohen, GSA Abstracts with Programs 14, 466 1982.
5. Classification, mineral chemistry, and modal analysis of chondrules in the Mokoia C3(V) carbonaceous chondrite, R.E. Cohen, Meteoritics 17, 199-200 1982.
6. On the origin of spinel-rich inclusions, A.S. Kornacki and R.E. Cohen, In: Lunar and Planetary Science XIII, The Lunar and Planetary Institute, Houston, TX, 393-394 1983.
7. The nature of coarse-grained CAI's, A.S. Kornacki and R.E. Cohen, In: Lunar and Planetary Science XIII, The Lunar and Planetary Institute, Houston. TX, 401-402 1983.
8. Phyllosilicates in refractory inclusions in the Mokoia C3(V) chondrite, R.E. Cohen and A.S. Kornacki, In: Lunar and Planetary Science XIV, The Lunar and Planetary Institute, Houston, 128-129 1983.
9. Configurational entropy of coupled solid-solutions, R.E. Cohen, EOS 64, 346 1983.
10. Energy calculations, NMR MASS, and short-range order in aluminous pyroxenes, R.E. Cohen, J.E. Post, R.J. Kirkpatrick, and K.A. Smith, EOS 65, 287 1984.
11. Statistical mechanics of aluminous pyroxenes: Effects of short-range order on thermodynamic properties, R.E. Cohen, Geological Society of America Abstracts with Programs 16, 474 1984.

12. Concentric objects in C2 and C3 carbonaceous chondrites, R.E. Cohen, Meteoritics 20, 627-628 1985.
13. Thermodynamic properties of aluminous pyroxenes: Results of least squares refinements, R.E. Cohen, Geological Society of America Abstracts with Programs 17, 550 1985.
14. LAPW study of the high pressure properties of MgO and CaO, M.J. Mehl, R.E. Cohen, L.L. Boyer, and H. Krakauer, Conference on Quantum Theory and Experiment Applied to Solids, Univ. of Maryland, College Park, Maryland 1986.
15. Comparison of LAPW Charge densities and energies with overlapping atoms and ions, M.J. Mehl and R.E. Cohen, EOS 67, 1217 1986.
16. Potential induced breathing in non-cubic oxides, R.E. Cohen, M.J. Mehl, and L.L. Boyer, Bulletin American Physical Society 31, 496 1986.
17. Thermodynamic mixing properties of coupled solid solutions, R.E. Cohen, EOS 67, 361 1986.
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