

BIOGRAPHICAL SUMMARY

Professor Paulo J. M. Monteiro

Department of Civil Engineering, University of California
725 Davis Hall, Berkeley, CA 94720

EDUCATION

Ph.D. (1985): Department of Civil Engineering, Structural Engineering and Structural Mechanics (SESM), University of California at Berkeley.

Master of Science in Engineering (1981): Department of Civil Engineering, Structural Engineering and Structural Mechanics (SESM), University of California at Berkeley.

Civil Engineer (1979): Escola Politecnica da Universidade de Sao Paulo.

POSITIONS HELD

Professor, Department of Civil Engineering, University of California at Berkeley (1994-present).

Faculty Scientist, Department of Materials, Lawrence Berkeley Laboratory (2008-present)

Group Head, Structural Engineering, Mechanics, and Materials (2002-6).

Vice-Chair, Technical Services, Department of Civil Engineering, University of California at Berkeley (1993-96).

Associate Professor, Department of Civil Engineering, University of California at Berkeley (1990-94).

Assistant Professor, Department of Civil Engineering, University of California at Berkeley (1987-90).

Consulting Engineer for the Grupo de Cimento Paraiso (1986).

Post Graduate Research Engineer (1985) Department of Civil Engineering, University of California at Berkeley.

Research Assistant (1980-85) at the Department of Civil Engineering, University of California at Berkeley.

Ph.D. THESIS

Microstructure of Concrete and its Influence on the Mechanical Properties. University of California Berkeley, 1985.

AWARDS

Member of the National Academy of Science (2020)

Honorary Member of the Brazilian Concrete Institute (2019)

Della Roy Lecture Award (2017)

2016 Stephen Brunauer Award from the Cements Division of the American Ceramics Society for the best paper on cements published in 2015.

Member of the EU Academy of Sciences (2017).

CEE Distinguished Speaker University of Illinois Urbana-Champaign (2015)
Guest Professor at Southeast University, China, 2015, Guest Professor (2015)
Tongji University, *Visiting Professor at Cachan University, France, 2015.*
Outstanding Paper Award, International Conference on Sustainable Construction
Materials and Technologies (SCMT3), Kyoto, Japan, 2013.
Roy W. Carlson Distinguished Professor (2008-present), Department of Civil
Engineering, University of California at Berkeley.
Honra ao Merito Award (2010) from IBRACON.
Guest Professor (2010) at Wuhan University of Technology.
Premio Ari Torres (2005), highest award for concrete research given by the
Brazilian Concrete Institute.
Brunauer Award (2004) from the American Ceramics Society.
Wason Medal for Materials Research, (2003) from the American Concrete
Institute.
Livre Docente (1993) from the University of São Paulo, Brazil.
Presidential Young Investigator (1989-94), National Science Foundation.
Roy W. Carlson Distinguished Professor (1987-88), Department of Civil
Engineering, University of California at Berkeley.
Royal Norwegian Council for Scientific and Industrial Research Fellowship
(1992), Norway.
British Council Fellowship, Imperial College, University of London (1988-89).
Carlson-Polivka Fellowship (1985) given by the Department of Civil
Engineering, U.C. Berkeley.
William & Helena Popert Fellowship (1984): given by the Department of Civil
Engineering, U.C. Berkeley.
Rotary Foundation Fellowship (1980-1981) for MS degree at U.C. Berkeley.

RESEARCH POSITIONS

Invited Researcher at the Department of Materials Science, Imperial College (University of London) by the British Council (Summers 88, 89) to study alkali-aggregate reaction.

Post Graduate Research Engineer (June to December 85) with the following duties and responsibilities: (1) Conduct research on the microstructure of concrete. (2) Study the microcracking and the composite nature of mortar using acoustic wave measurements and mathematical modeling. (3) Study irreversible phenomena during the expansion of concrete.

Research Assistant (June 80 to June 85) at the UCB Civil Engineering Department to research the following topics: (1) Viscoelastic behavior of concrete, (2) Cryogenic concrete, (3) Microstructure and micromechanics of concrete.

University Paul Sabatier, France (Winter 1982) to study the rock-cement paste interface.

Petrobras (Brazilian Petroleum Company, Summer 1982) to develop API cement for oil well cementing and to study concrete for off-shore platforms.

Instituto de Pesquisas Tecnológicas (Brazilian Research Institute, 1978-1980) to study cracking and failure of concrete.

RECENT CONSULTING WORK

Consultant for Santo Antonio Dam

Consultant for Maua Dam

Member of the Technical Board for Calera Co.

Chair of the Technical Board for CalStar cement (2007-2009)

APA/Chevron: Storage tanks

FURNAS Centrais Electricas: concrete large dams constructed using roller compacted concrete.

Irape Consortium: feasibility study of using pyrite in a large concrete dam

Morley Contractors: development of the concrete used in the Los Angeles Cathedral.

Caltrans: Litigation of the Paso Robles bridge.

ARPA: Modeling of the creep data for the concrete used in the new Bay Bridge.

Termite: for the production of two videos for the Discovery Channel (Roman Concrete and Troy).

PROFESSIONAL SOCIETIES

American Society of Civil Engineers (ASCE)

American Concrete Institute (ACI)

Chi Epsilon

United States Committee on Large Dams (USCOLD)

American Ceramics Society

American Chemical Society

MEMBER OF THE EDITORIAL BOARD

Advances in Concrete Construction, American Editor-in-Chief

Associate Editor - Journal of Nanomechanics and Micromechanics, ASCE

Cement and Concrete Research

Revista Ingenieria de Construcción

International Journal of Concrete Structures and Materials

Materiales de Construcción, Institute Eduardo Torroja

Frontiers: Materials, EPFL

PRESENT Ph.D. STUDENTS

Juan Carvajal Vinasco: Green cements

Jiaqi Li: Advanced cements with low-carbon footprint.

Daniela Martínez: Sustainability of concrete

Ying Tsun Su: High-Pressure Behavior of Calcium Silicate Hydrates

Ke Xu: Advanced Image Processing of microtomographic data

FORMER Ph.D. STUDENTS

1. *Jy-An Wang* (1987): "A Modified Direct Method for the Calculation of the Elastic Properties of Composite Materials" (Prof. J. Lubliner, co-chairman).
2. *Vladimir A. Paulon* (1991): "Microstructure of the Aggregate-Cement Paste Transition Zone" (at University of Sao Paulo).
3. *Vassilis P. Panoskanis* (1992): "Rate Effect in the Constitutive Modeling of Concrete and Geomaterials Including Plasticity and Damage" (Prof. Lubliner, co-chair).
4. *Virgilio A. Ghio* (1993): "The Rheology of Fresh Concrete and Its Effect on the Shotcrete Process".
5. *Kuokai Shyu* (1993): "Nodal-based discontinuous Deformation Analysis".
6. *Chiao-Tung Chang* (1994): "Nonlinear Dynamic Discontinuous Deformation Analysis with Finite Element Meshed Block System".
7. *Kamran Nemati* (1994): "Generation and Interaction of Compressive Stress-Induced Microcracks in Concrete".
8. *Kejin Wang* (1994): "Expansion-Related Concrete Deterioration: Interaction Between Microstructure, Chemistry and Performance".
9. *Monica Prezzi* (1995): "Analysis of the Mechanisms of Concrete Deterioration".
10. *Denise Del Molin* (1995): High Strength Concrete (at University of Sao Paulo)
11. *David Trejo* (1997): Microstructural design and electrochemical evaluation of Fe/2Si/0.1C dual-phase ferritic Martensitic steel for concrete reinforcement
12. *Kim Kurtis* (1998), Transmission Soft X-ray Microscopy of the Alkali-Silica Reaction
13. *Chun-Liang Lin* (1999), Compressive Strength of Continuous Fiber-Reinforced Composites, Prof. Hari Dharan, co-chair.
14. Beverly P. DiPaolo (2000), An experimental investigation on the axial crush of a thin-walled, stainless steel box component, Prof. Gronsky, co-chair.
15. David J. Corr (2001), A Microscopic Study of Ice Formation and Propagation in Concrete.
16. J. Zhang (2002): Non invasive surface measurement of the corrosion impedance of rebar in concrete.
17. Hal Amick (2004), Concrete Damping Properties and Their Modifications, 2004.
18. Kome Shomglin (2004), Susceptibility of Deformed Granitic Rocks of the Santa Rosa Mylonite Zone to the Alkali Silica Reaction in Concrete, Prof. Rudy Wenk (co-advisor)

19. Nicole P. Hasparyk (2005), Investigation of concrete affected by the alkali-silica reaction, Prof. D. Dal Molin (co-advisor), University Federal do Rio Grande do Sul, Brazil.
20. Ana Paula Kirchheim (2008), Characterization of the hydration of cubic and orthorhombic tricalcium aluminate, Prof. D. Dal Molin (co-advisor), University Federal do Rio Grande do Sul, Brazil.
21. Fariborz Vossoughi (2008), Assessing Impact Resistance of Concrete-Based Materials, Prof Ostertag (co-advisor).
22. Cruz Carlos (2008), Microscopic Observations of Internal Frost Damage and Salt Scaling
23. Mauricio Mancio (2009), Electrochemical and in-situ Surface-Enhanced Raman Spectroscopic (SERS) Study of Passive Films Formed on Low-Carbon Steel in Highly Alkaline Environments, Prof. Devine (co-advisor)
24. Jae-Eun Oh (2009), High Pressure Synchrotron X-ray Diffraction of Calcium-Silicate Hydrates and Alkali-activated Inorganic Binder.
25. Seyoon Yoon (2012) Multi-scale studies of transport and adsorption phenomena of cement-based materials in aqueous and saline environment.
26. Cagla Meral (2012), The Study of Disorder in Amorphous Silica, Alkali-Silica Reaction Gel and Fly Ash by (Profs. Monteiro and Ostertag, advisors).
27. Pierre-Adrien Itty (2012), Microscale investigation of the corrosion performances of low-carbon and stainless steels in highly alkaline concretes.
28. Ju-hyuk Moon (2013), Experimental and Theoretical Studies on Mechanical Properties of Complex Oxides in Concrete.
29. Craig Hargis (2013) Advances in Sustainable Cements
30. Sungchul Bae (2013): Synchrotron X-ray Spectro-microscopy and Micro-diffraction Study on the Hydration of Tricalcium Silicate including High-Volume Fly Ash
31. Kemal Celik (2015): Development and Characterization of Sustainable Self-Consolidating Concrete Containing High Volume of Limestone Powder and Natural or Calcined Pozzolanic Materials
32. Guoqing Geng (2017): Characterization of Cementitious Materials with Synchrotron-Radiation-Based Nanoprobes
33. Carlos Orozco (2017): Determination of structural changes, bonds character and mechanical properties of materials formed by the interaction between C-S-H and soluble organic compounds

Post-docs

Rupert Myers: 2015-2016, Hydration of C₃A
Daniel Hernandez-Cruz, 2012-2014, Post-Doc, spectromicroscopy
Rae Taylor, 2011-2015, TEM nanotomography
Juyoung Ha, 2008-2011, Post-Doc, Spectromicroscopy
Mauricio Mancio, 2008-2011, Post-Doc, Corrosion of Concrete
Sezen Soyer, 2010, Pair Distribution Functions
Jae-En Oh, 2009-2011, High pressure physics of crystals
Kamile Tosun, 2009-2010, Durability of Concrete
Lawrie Skinner, 2009, Pair Distribution Function
Yelena Shvets, 2007-2008, Modeling of Porous Media
Nadia Segre (2000-01), Surface chemistry
Maria Garcia Junger (2001-02); X-ray microscopy
Jaesuk Ryou, (2000-02), Corrosion of Concrete
Flavio Rodrigues (University of Campinas): surface chemistry (1996-98)
Kamran Nemati (1995-98): high-strength concrete
Melanie Lutz (Presidential Post-Doctoral Fellow, UCB): micromechanics of concrete (1995-97)
Gordon Vrdoljak (1998-99): atomic force microscope

RESEARCH WITH VISITING SCHOLARS AT BERKELEY

Yunsheng Zhang, College of materials science and engineering, Southeast University, 21189, 2013-2014.
Qinfei Li, School of Transportation Science and Engineering, Harbin Institute of Technology, 2012-2014.
Jianguo Han, Department of Civil Engineering, Tsinghua University, 2014, Image Analysis.
Sifeng Liu, Tongji University, 2013, Durability of Concrete.
Kang Su Kim, Department of Architectural Engineering, The University of Seoul, 2013, durability of concrete.
Tetsuya Oyamada, Associate Professor, Iwate University, 2013, ice formation in concrete.
Ouyang dong Professor, Jinan University, 2012-present, green cements
Manabu Kanematsu, Visiting Scholar, 2011-2012, Tokyo University of Science, neutrons radiography
Ki Hyun Kim, Seoul National University, 2011-2012, Geopolymers
Marie Jackson, Visiting Research Engineer, 2011- present, Roman concrete
Weiguo Shen, Visiting Research Engineer, 2011- 2013, microscopy of cements
Penghui Li, Visiting Scholar, 2011-2012, Tsinghua University, concrete dams
Hailong Wang, 2009-2010, Visiting Scholar, Zhejiang University, Durability of Concrete
Wei Shi, 2009-2010, Visiting Scholar, Northeast Dianli University, Geopolymers
Se-Jin Choi, SAMPYO Corporation, Korea, 2007-2008, Geopolymers
Shiyun XIAO, Visiting Scholar, Dalian University (China), 2007, Micromechanics

Moh Boulfiza, University of Saskatchewan, 2007, Prediction models for concrete
 Ssang-Sun Jun, Pusan National University, 2006-2008, Alkali-Silica Reaction.
 Ichiro Kono (Toyota National College of Technology, 2005-2006) Durability of Concrete
 Hakan Nuri Atahan (Visiting Scholar, University of Turkey, 2004-2005), Ice formation in concrete
 Olivier Coussy (Miller Professor, Navier Institute, 2004), Cryosuction in concrete
 Vladimir Paulon (Universidade de Campinas, 2004), Alkali-silica reaction
 Ravindra Gettu (University of Catalonia, 2004), Fiber Reinforced Concrete
 Jorge Crempion (University of Chile, 2004) Structural Engineering
 Denise Silva (Federal University of St. Catarina 2003-04), polymers in concrete
 T. Saeki (Nigata University), durability of concrete
 Hong Rhim (Yonsei University, 2002-2003), NDE of concrete
 Rogério de Oliveira Rodrigues, (UNESP University, 2001-02), Damage in Dams
 Kwang M. Lee, (Sungkyunkwan University, Korea, 2001-02), Modeling of Concrete
 L. Turanli (Metu University, 1999-2000): ASR
 J. Wang (National Central University, 1999-2000): modeling of concrete
 O. Nielsen (Chalmers University, 1999): durability of concrete
 H. Kwon (Yeungnam University, Korea, 1999-2000): repair of concrete
 S. Go (Pukyong National University, South Korea): ice propagation (1998-99)
 T. Noguchi (University of Tokyo): high-strength concrete (1997-98)
 H. Fujiwara (Nihon Cement Company): cement production (1997-98)
 Young Su Kim Korea: non-destructive methods (1995-97)
 Reinhard Piltner (VDI Dusseldorf, Germany): finite element methods for fracture mechanics. (1992-95)
 João Hanai (University of São Carlos, Brazil): durability of ferrocement.
 Paulo Helene (Escola Politécnica of University of São Paulo, Brazil): concrete mix proportioning. (1992-94)
 Shingo Miyazawa (Hiroshima University, Japan): autogenous volume change (1993-94)
 Sung Hoo Kang (Dongshin University, Korea): fracture mechanics of concrete. (1992)
 Abba Zayed (University of South Florida, Tampa): the aggregate-cement paste transition zone. (1989)
 Karen Scrivener (Imperial College, London University): alkali-aggregate reaction. (1988)

RECENT SPONSORED RESEARCH

- SusChEM: Environmentally sustainable concretes enabled by multiscale investigation of ancient Roman concretes (Co-PI with Roya Maboudian, \$ 497,709) NSF, 2014-2017
- Building Efficiency and sustainability in the Tropics (Co-PI, multi-investigator award), (\$40,000,000, for my work at UC Berkeley, \$750,000) 2012-2017.
- Oak Ridge National Laboratory, Research on Alkali-Silica Reactions. Sponsor Award ID: 033382-002. PI. Total: \$55,000

- Siam Cement Company, Nano Characterization of the Hydration of Calcium Aluminate Phases, Including the Effect of Chemical Admixtures. Sponsor Award ID: 038178-002. PI. Total: \$140,307, 2015-2016.
- Green Concrete and Sustainable Construction: A Multi-scale Approach (\$ 8 Million), 2008-2013 (renewed yearly), KAUST.
- The Science of Concrete with Fly Ash: Fundamental Models that Enable New Technology for Expanded Use of Fly Ash (Co-PI), \$237,827, ARRA-NIST, 09/01/11 – 12/31/12.
- ALS Project ALDOWC, LBNL, \$67,401, 05/01/12 – 01/31/2013.
- Identification of Reactive Aggregates Using Neutron Diffraction and Development of Methods to Reduce the Alkali-silica Reaction Expansion, (Wenk, co-PI), \$220,000, NSF, 2006-2010.

RECENT INVITED LECTURES

- Characterization of Advanced Cementitious Materials Using X-Ray Synchrotron Radiation, Gordon conference on Instructive Surfaces: From Guiding Chemical Reactions to Controlling Protein Adhesion, 2019
- X-ray Synchrotron Radiation Sheds New Light on the Nanostructure of Cementitious Materials The Hong Kong University of Science and Technology, 2018.
- DEVELOPMENT OF MULTI-FUNCTIONAL ENERGY-EFFICIENT STRUCTURAL MATERIALS, Croatia, 2017.
- Multiscale X-ray Imaging: from meter to nanometer, *UT Austin Department Distinguished Lecturer*, April 2016
- High-resolution imaging of materials, Georgia Tech, 2016.
- Advances in understanding hydration of Portland cement, Keynote speaker at the International Congress of Cement Chemistry, Beijing, 2015
- Cementitious Materials under the Nanoscope, IIT Madras, 2015
- Unlocking the secrets of ancient Roman concrete, IIUC, 2015
- Advances in Green Concrete: A Multi-scale Approach, Northwestern University, 2015
- Series of lectures on durability and nanotechnology given at Harbin, Southeast and Tongji Univeristy, 2015.
- Two thousand years of concrete technology and the challenges for the new millennium, Houston University, 2014
- Cement and Concrete Research Using X-rays at the Advanced Light Source in Berkeley, Cachan University, 2015
- XIII Civil Engineering Symposium from Universidad Panamericana, Guadalajara, May, 2014.
- Role of Chemical Admixtures in the Concrete Industry, *Invited Lecture*, 4th Conference of Chemical Admixtures on Structures, Ankara, October 2013.

Patents

1. Paulo Monteiro and Frank Morrison “Non-Destructive Method of Determining the Position and Condition of Reinforcing Steel in Concrete”, US Patent

- 5,855,721 (1999).
2. Brent R. Constantz, Laurence Clodic, Cecily Ryan, Miguel Fernandez, Kasra Farsad, Sidney Omeron, Philip Tuet, Paulo Monteiro, Gordon E. Brown, Katharine Geramita. "Production of Carbonate-Containing Compositions from Material Comprising Metal Silicates", US Patent US 7,749,476 B2 (2010).
 3. Brent R. Constantz, Paulo J.M. Monteiro, Miguel Fernandez, Katharine Geramita, Karin Yaccato, Methods and Systems for Utilizing Waste Sources of Metal Oxides, Patent No. 9260314 (2016).
 4. Constantz, B. R., Monteiro, P.J. M. , Self, K., Chen, I., Cement and Concrete with Reinforced Material, Patent No. 8,906,156 B2 (2014).

PUBLICATIONS

Books

1. Mechanical Modeling of the Transition Zone, Chapter 4 in "Interfacial Transition Zone in Concrete", edited by J. C. Maso, E & FN SPON, (1995).
2. Computer Tomography of Reinforced Concrete (with C.Y.Pichot and K. Belkebir), Chapter 12, Materials Science of Concrete, American Ceramics Society (1998).
3. The elastic moduli of concrete, Handbook of Elastic Properties of Solids, Liquids and Gases edited by Levy, Bass, and Stern, Volume II: Elastic Properties of Solids: Theory, Elements, and Compounds, Novel Materials, Technological Materials, Alloys, and Building Materials, Academic Press, pp. 393-411, (2001)
4. Long Term Durability of Structural Materials (edited with K.P. Chong, J. Larsen-Basse, K. Komvopoulos), Elsevier Science Ltd, Oxford, UK. (2001).
5. P.K. Mehta and P.J.M. Monteiro, *Concrete: Microstructure, Properties, and Materials*, McGraw-Hill, fourth edition (2014) [third edition published by McGraw-Hill (2006), second edition published by Prentice Hall, (1993). [Translated to Japanese, Chinese, Greek, Spanish, Portuguese, and Persian]

Refereed Journals

A. Archival Journals

1. Monteiro, P.J.M. and P.K. Mehta, "Ettringite Formation on the Aggregate-Cement Paste Interface," *Cem. Concr. Res.*, vol. 15, 1985, pp. 378-380.
2. Monteiro, P.J.M., S. J. Bastacky and T.L. Hayes, "Low-Temperature Scanning Electron Microscope Analysis of the Portland Cement Paste Early Hydration," *Cem. Concr. Res.*, vol. 15, 1985, pp. 687-693.
3. Monteiro, P.J.M., O.E. Gjorv and P.K. Mehta, "Microstructure of the Steel-Cement Paste Interface in the Presence of Chloride," *Cem. Concr. Res.*, vol. 15, 1985, pp. 781-784.
4. Monteiro, P.J.M., J.C. Maso and J.P. Ollivier, "The Aggregate-Mortar Interface," *Cem. Concr. Res.*, vol. 15, 1985, pp. 953-958.
5. Monteiro, P.J.M. and P.K. Mehta, "The Transition Zone Between Aggregate and Type K Expansive Cement," *Cem. Concr. Res.*, vol. 16, 1986, pp. 111-114.

6. Monteiro, P.J.M. and J. Lubliner, "Effect of Stress on the Irreversible Expansion of Concrete," *Cem. Concr. Res.*, vol. 16, 1986, p. 119.
7. D. Pirtz, K. Thomas and P.J.M Monteiro, "Stress Relaxation: Comparison of Measured and Computed Values," *ACI Journal*, vol. 83, 1986, pp. 432-437.
8. Monteiro, P.J.M. and P.K. Mehta, "Interaction Between Carbonate Rock and Cement Paste," *Cem. Concr. Res.*, vol. 16, 1986, pp. 127-134.
9. Monteiro, P.J.M. and P.K. Monteiro, A Reply to Discussion of the Paper "Interaction Between Carbonate Rock and Cement Paste," *Cem. Concr. Res.*, vol. 16, 1986, p. 974.
10. R.W. Zimmerman, P.J.M Monteiro, and M.S. King, "The Elastic Moduli of Mortar as a Porous-Granular Material," *Cem. Concr. Res.*, vol. 16, 1986, pp. 239-245.
11. Monteiro, P.J.M. and W.P. Andrade "Analysis of the Rock-Cement Paste Bond Using Probabilistic Treatment of Brittle Strength," *Cem. Concr. Res.*, vol. 17, 1987, pp. 919-926.
12. R.J. Detwiler, P.J.M Monteiro, H. Wenk and Z. Zhong, "Texture of Calcium Hydroxide Near the Cement Paste-Aggregate Interface," *Cem. Concr. Res.*, vol. 18, 1988, pp. 823-829.
13. J.A. Wang, P.J.M Monteiro and J. Lubliner, "Effect of Ice Formation on the Elastic Moduli of Cement Paste and Mortar," *Cem. Concr. Res.*, vol. 18, no. 6, 1988, pp. 874-885.
14. Monteiro, P.J.M. and M.S. King, "Experimental Studies of Elastic Wave Propagation in High-Strength Mortar," *ASTM Journal*, vol. 10, no. 2, 1988, pp. 68-74.
15. P.K. Mehta and P.J.M Monteiro, "Blended and Modified Cements," State of the Art 1987, *Cement Research Progress*, American Ceramics Society, 1988.
16. Monteiro, P.J.M., O.E. Gjorv, and P.K. Mehta, "Effect of Condensed Silica Fume on the Steel-Cement Paste Transition Zone," *Cem. Concr. Res.*, vol. 19, no. 1, 1989, pp. 114-123.
17. J. Ju, P.J.M Monteiro and A. Rashed, "Continuum Damage of Cement Paste and Mortar as Affected by Porosity and Sand Concentration," *Journal of Engineering Mechanics*, ASCE, vol. 115, no. 1, 1989, pp. 105-130.
18. A.I. Rashed, P.J.M Monteiro, J. Bastacky and T.L. Hayes, "Ice in Cement Paste as Analyzed in the Low-Temperature Scanning Electron Microscope," *Cem. Concr. Res.*, vol. 19, 1989, pp. 306-314.
19. Monteiro, P.J.M. and C.P. Ostertag, "Analysis of the Aggregate-Cement Paste Interface Using Grazing Incidence X-Ray Scattering," *Cement and Concrete Research*, Vol. 19, 1989, pp.987-988.
20. Monteiro, P.J.M. and J. Lubliner, "A Generalized Continuum Theory for Concrete," *Cement and Concrete Research*, Vol. 19, 1989, pp. 929-938.
21. A. Mor, P.J.M Monteiro and W. Hester, "Observations of Healing of Cracks in High-Strength Lightweight Concrete," *Cement, Concrete and Aggregate*, Vol. 11, No. 2, 1989, pp. 121-125.

22. A. Rashed, P.J.M Monteiro, R. Williamson and J. Bastacky, "The Morphology of Air-Entrained Voids at Early Ages" *Cement, Concrete and Aggregate*, Vol. 11, No. 2, 1989, pp. 126-128.
23. Monteiro, P.J.M. and P.K. Mehta, "Blended and Modified Cements," State of the Art 1988, *Cement Research Progress*, American Ceramics Society, Chapter 8, 1989, pp. 214-245.
24. O.E. Gjrv, P.J.M Monteiro and P.K. Mehta, "Effect of Condensed Silica Fume on the Steel-Concrete Bond," *ACI Materials Journal*, Vol. 87, November-December 1990, pp. 573-580.
25. A.I. Rashed, P.J.M Monteiro, J. Bastacky and T.L. Hayes, "A Discussion of the Paper Ice in Cement Paste as Analyzed in the Low-Temperature Scanning Electron Microscope," *Cement and Concrete Research*, Vol 20, 1990, pp. 495-496.
26. Monteiro, P.J.M. and C. Human, "Blended and Modified Cements," *State of the Art 1989 Cement Research Progress*, American Ceramic Society, Chapter 7, 1990, pp. 173-214.
27. P.J. Perie and P.J.M Monteiro, "Determination of Fracture Mechanism by Microscopic Observation of Cracks," *Int. J. of Rock Mech. Min. Sci. & Geomech. Abstr.*, Vol. 28, No. 1, 1991, pp. 83-84.
28. Monteiro, P.J.M., J. Asselanis and W. MacCracken, "Investigation of the Microstructure and Mechanical Properties of the Structural Materials of the I-880 Double-Deck Viaduct," *ACI Materials Journal*, Vol. 88, May-June 1991, pp. 288-293.
29. J. Cohen and P.J.M Monteiro, "Durability and Integrity of Marble Cladding: A State of the Art Review," *ASCE Journal*, Vol. 5, No. 2, May 1991, pp. 113-124.
30. K.A. Heiskanen, P.J.M Monteiro and H.C. Rhim, "Computer Simulations of Limited Angle Tomography of Reinforced Concrete," *Cement and Concrete Research*, Vol. 21, 1991, pp. 625-634.
31. Monteiro, P.J.M., "A Note on the Hirsch Model," *Cement and Concrete Research*, Vol. 21, 1991, pp. 947-950.
32. C.A. Human and P.J.M Monteiro, "Blended and Modified Cements," *State of the Art 1990, Cement Research Progress*, American Ceramic Society, Chapter 6, 1991, pp. 167-200.
33. A.U. Nilsen and P.J.M Monteiro, "Concrete: A Three Phase Material," *Cement and Concrete Research*, Vol. 23, 1993, pp. 147-151.
34. H.E. Martz, D.J. Schneberk, G.P. Roberson and P.J.M Monteiro, "Computerized Tomography Analysis of Reinforced Concrete," *ACI Materials Journal*, Vol. 90, No. 3, May-June 1993, pp. 259-264.
35. Monteiro, P.J.M., "Blended and Modified Cements," *State of the Art 1991, Cement Research Progress*, American Ceramic Society, 1993.
36. Monteiro, P.J.M., P.H. Helene, and Kang, "Designing Concrete Mixtures for Strength, Elastic Modulus and Fracture Energy," *Rilem Journal*, Vol. 26, No. 162, 1993.
37. A.U. Nilsen and P.J.M Monteiro, "A Reply to Discussion of the Paper Concrete: A Three Phase Material," *Cement and Concrete Research*, Vol. 24, 1994.

38. V. Ghio, P.J.M Monteiro and L. Demsetz, "The Rheology of Fresh Cement Paste Containing Polysaccharide Gums," *Cement and Concrete Research*, Vol. 24, 1994.
39. O. Gjorv, K. Tan and P.J.M Monteiro, "Effect of Elevated Curing temperature on the Chloride Permeability of High-Strength Lightweight Concrete," *CCA Journal*, Vol. 16, No. 1, 1994.
40. D. Trejo, P.J.M Monteiro, G. Thomas and X. Wang, "Mechanical Properties and Corrosion Susceptibility of Dual Phase Steel in Concrete," *Cement and Concrete Research*, Vol. 24, 1245, 1994.
41. Monteiro, P.J.M., "A Reply to Discussion designing Concrete Mixtures for Strength, Elastic Modulus and Fracture Energy," *Rilem Journal*, 1994.
42. K. Scrivener and P.J.M Monteiro, "The Alkali-Silica Reaction in Monolithic Opal," *Journal of the American Ceramic Society*, Vol. 77, pp. 2849, 1994.
43. V. Ghio, P.J.M Monteiro and O. Gjorv, "Effect of Polysaccharide Gums on Fresh Concrete Properties," *ACI Journal*, Vol. 91, pp. 600, 1994.
44. A.U. Nielsen, P.J.M Monteiro and O. Gjorv, "Quality Determination of Lightweight Aggregate," *Cement and Concrete Research*, Vol. 24, pp. 1423-1427, 1994.
45. A.U. Nielsen, P.J.M Monteiro and O. Gjorv, "Estimation of the Elastic Moduli of Lightweight Aggregate," *Cement and Concrete Research*, Vol. 25, No. 2, pp. 276, 1995.
46. C.T. Chang and P.J.M Monteiro, "The Elastic Moduli of Calcium Hydroxide," *Cement and Concrete Research*, Vol. 25, No. 8, pp. 1605, 1995.
47. S. Miyazawa and P.J.M Monteiro, "Volume Change of High-Strength Concrete in Moist Conditions," *Cement and Concrete Research*, Vol. 26, pp. 567, 1996.
48. C.T. Chang, K. Nemati, K. Shyu and P.J.M Monteiro, "Behavior of Marble under Compression," *ASCE Journal of Materials in Civil Engineering*, pp. 157, 1996.
49. K. Wang, P.J.M Monteiro, B. Rubinsky and A. Arav, "Microscopic Study of Ice Propagation in Concrete," *ACI Journal*, Vol. 93, pp. 370, 1996.
50. M. Prezzi, P. Geyskens, and P.J.M. Monteiro, "Reliability Approach to Service-Life Prediction of Concrete Exposed to Marine Environments," *ACI Materials Journal*, V93 N6, 544, (1996).
51. M. Prezzi, Monteiro, P. J. M., and G. Sposito, "Alkali-Silica Reaction - Part 1: Use of the Double-Layer Theory to Explain the Behavior of the Reaction Product Gels," *ACI Journal*, V94 , 10, (1997).
52. V. Ghio, and P.J.M. Monteiro, "Bond Strength of Reinforcing Bars in Reinforced Shotcrete," *ACI Materials Journal*, MAR-APR, V94 N2: 111-118, (1997).
53. D. Trejo, Monteiro, P. J. M., and G. Thomas, "Development of Steels for Improved Performance in Reinforced Concrete," *Journal of Materials in Civil Engineering*, V9 N1, 1, (1997).
54. Melanie P. Lutz, Monteiro, P. J. M., and Robert W. Zimmerman, "Inhomogeneous Interfacial Transition Zone Model for the Bulk Modulus of Mortar," *CCR journal*, V27 N7: 1113-1122 (1997).
55. K. Nemati, and P.J.M. Monteiro, "A new method to observe three-dimensional fractures in concrete using liquid metal porosimetry technique," *CCR Journal*, V27 N9: 1333-1341, (1997).

56. Monteiro, P. J. M., Kejin Wang, Garrison Sposito, Marcia C. dos Santos and W. Pacelli de Andrade, "Influence of Mineral Admixtures on the Alkali-Aggregate Reaction," *CCR Journal*, V27 N12: 1899, (1997).
57. P. Geysken, A. Der Kiureghian, and P.J.M. Monteiro, "Bayesian Prediction of the Elastic Modulus of Concrete," *ASCE Journal of Structural Engineering*, V124, N1:89, (1998).
58. M. Prezzi, Monteiro, P. J. M., and G. Sposito, "Alkali-Silica Reaction - Part 2: The Effect of Chemical Additives," *ACI Journal*, JAN-FEB, V95 N1:3-10, (1998).
59. V. Ghio, P.J.M. Monteiro, "The Effects of Polysaccharide Gum Additives on the Shotcrete Process," *ACI Materials Journal*, Vol. 95, No.2, 152-157 (1998).
60. V. Ghio and P.J.M. Monteiro, A Reply to Discussion of the Paper, "Bond Strength of Reinforcing Bars in Reinforced Shotcrete," *ACI Materials Journal*, Vol. 95, No.2, 196-197 (1998).
61. E. Kurtis, Monteiro, P. J. M., J. Brown, and W. Meyer-Ilse, "Imaging of ASR Gel by Soft X-ray Microscopy," *CCR journal*, V28 N3:411-421, (1998).
62. Monteiro, P.J.M., Wang, K., Sposito, G., dos Santos, M.C., and de Andrade, W. P., A Reply to Discussion of the Paper "Influence of Mineral Admixtures on the Alkali-Aggregate Reaction", *CCR Journal*, Vol. 28, No. 8, p.1195, 1998.
63. Cook, N.G.W., Monteiro, P.J.M. and K. Nemati, "A New Method for Studying Stress-Induced Microcracks in Concrete," *ASCE Materials Journal*, Vol.10, No. 3, pp.128-134, 1998.
64. Nemati, K.M., Monteiro, P.J.M. and Scrivener, K.L., "Analysis of Compressive Stress-Induced Cracks in Concrete," *ACI Materials Journal*, Vol. 95, No. 5, p. 617, 1998.
65. Monteiro, P.J.M., Morrison, F., and Frangos, W., "Non-Destructive Measurement of Corrosion State of Reinforcing Steel in Concrete," *ACI Materials Journal*, Vol. 95, No. 6, pp. 704-709, Nov-Dec. 1998.
66. Rodrigues, F.A., and P.J.M. Monteiro, Sposito, G., "Surface Charge Density of Silica in Water-Acetone Mixtures," *Journal of Colloid and Interface Science*, Vol. 211, p. 408, 1999.
67. Wang, K., and P.J.M. Monteiro, "Optical Microscopy Analysis of Ice Formation and Propagation in Concrete," *L'industria Italiana del Cemento*, No. 739, p. 65, 1999.
68. Ghio, V. and P.J.M. Monteiro, A Reply to Discussion of the Paper "The Effects of Polysaccharide Gum Additives on the Shotcrete Process," *ACI Materials Journal*, Vol 96, No. 2, p. 271 1999.
69. Rodrigues, F.A., Monteiro, P.J.M. and Sposito, G., "The Alkali-Aggregate Reaction: The Surface Charge Density of Silica and its Effect on the Expansive Pressure," *CCR Journal*, Vol. 29, p. 527, 1999.
70. Rodrigues, F.A. and P.J.M. Monteiro, "Hydrothermal synthesis of cements from rice hull ash," *Journal of Materials Science Letters*, **V18** (N19): 1551-1552, Oct. 1999.
71. Kurtis, K.E., P.J.M. Monteiro, J.T. Brown, and W. Meyer-Ilse, "High resolution transmission soft X-ray microscopy of deterioration products developed in large concrete dams." *Journal of Microscopy-Oxford*, **V196** (PT3): 288-298, Dec, 1999.

72. Trejo, D., P.J.M. Monteiro, B. C. Gerwick and G.Thomas, "Microstructural design of concrete reinforcing bars for improved corrosion performance," *ACI Materials Journal*, **V97** (N1):78-83, Jan-Feb, 2000.
73. Kurtis, E., P.J.M. Monteiro and S. Madanat, "Empirical models to predict concrete expansion caused by sulfate attack. *ACI Materials Journal*, **V97**, 156, 2000; errata **V97**, 173, 2000.
74. Rodrigues, F. A., P.J.M. Monteiro and G. Sposito, A Reply to Discussion of the Paper, "The alkali-aggregate reaction: the surface charge density of silica and its effect on the expansive pressure" *Cement and Concrete Research*, **V30**(N3):503-504, (2000)
75. Harutyunyan, V.S., E.S. Abovyan, P.J.M. Monteiro, V.P. Mkrtychyan and M. Balyan, "Microstrain distribution in calcium hydroxide present in the interfacial transition zone," *CCR Journal, Cement and Concrete Research*, **V30**, 709, 2000.
76. Piltner, R. and P.J.M. Monteiro, "Stress analysis of expansive reactions in concrete," *Cement and Concrete Research*, **V30**, 843, 2000.
77. Gartner, E., K.E. Kurtis and P.J.M. Monteiro, "Proposed mechanism of C-S-H growth tested by X-ray microscopy," *Cement and Concrete Research*, **V30** (N5): 817-822, 2000.
78. Kurtis, K.E., P.J.M. Monteiro and W. Meyer-Ilse, "Soft x-ray spectromicroscopy for in situ study of corrosion," *Journal of Corrosion Science*, **V42** (N8): 1327-1336, 2000.
79. Hasparyk, N.P., P.J.M. Monteiro and H. Carasek, "Effect of silica Fume and Rice husk ash on the alkali-silica reaction," *ACI Materials Journal*, **V97** (N4): 486-492, 2000.
80. Bittencourt, R.M., J.T.F. Fontoura, W. Pacelli de Andrade, and P.J.M. Monteiro, "A Method of Proportioning Mass Concrete Mixtures Based on Fineness Modulus and Geometrical Gradation," *Journal of Materials in Civil Engineering*, **V13** (N1): 33-40, Jan-Feb 2001.
81. Monteiro, P.J.M., K. Shomglin, H.R. Wenk and Nicole P. Hasparyk, "Effect of Aggregate Deformation on the Alkali-Silica Reaction," *ACI Materials Journal*, **V98** (N2): 179-183, Mar-Apr 2001.
82. Corr, D., P.J.M. Monteiro and A. Der Kiureghian, "Sulfate attack of concrete: A reliability analysis," *ACI Materials Journal*, **V98** (N2): 99-104, Mar-Apr 2001.
83. Zhang, J., P.J.M. Monteiro and F. Morrison, "Non-invasive surface measurement of the corrosion impedance of rebar in concrete. Part I: experimental results, *ACI Materials Journal*, **V98** (N2): 116-125, Mar-Apr 2001.
84. Zhang, J. and P.J.M. Monteiro, "Validation of Resistivity spectra from reinforced concrete corrosion by Kramers-Kronig transformations," *Cement and Concrete Research*, **V31**, 603-607, 2001.
85. Kurtis, K.E., K. Shomglin, P.J.M. Monteiro, J. Harvey, and J. Roesler, "Accelerated test for measuring sulfate resistance of calcium sulfoaluminate, calcium aluminate, and portland cements, *Journal of Materials in Civil Engineering*, **V13** (N3):216-221, May-June 2001.

86. Turanli, L., K. Shomglin, C.P. Ostertag and P.J.M. Monteiro, "Reduction in alkali-silica expansion due to steel microfibers," *Cement and Concrete Research*, V31 (N5): 825-827, May 2001.
87. Monteiro, P.J.M., C. P. Ostertag, U. Nielson and J. Cohen, "Fatigue susceptibility of marble," *Materials & Design Journal*, 22, 393-398, 2001.
88. Rodrigues, F. A., P.J.M. Monteiro, and G. Sposito, "The alkali-silica reaction: the Effect of monovalent and bivalent cations on the surface charge of opal," *Cement and Concrete Research*, V31, 1549-1552, 2001.
89. Celestino. T., R. Piltner, P.J.M. Monteiro and C.P. Ostertag, "Fracture mechanics of marble," *Journal of Materials in Civil Engineering*, V13 (N6): 407-411, Nov-Dec 2001.
90. Kurtis, K.E., C.L. Collins and P.J.M. Monteiro, "The surface chemistry of the alkali-silica reaction: A critical evaluation and X-ray microscopy," *Concrete Science and Engineering*, V4, pp 1-11, March 2002.
91. Corr, D.J., P.J.M. Monteiro and J. Bastacky, "Microscopic characterization of ice morphology in entrained air voids," *ACI Materials Journal*, V99 (N2): 190-195, Mar-Apr 2002.
92. N. Segre, P.J.M. Monteiro, and G. Sposito, "Surface characterization of recycled tire rubber to be used in cement paste matrix," *Journal of Colloid and Interface Science*, V248, pp. 521-523, 2002.
93. Ryu, J.S. and P.J.M. Monteiro, "Effect of specific gravity of coarse aggregate on interfacial transition zone, permeability, and strength of concrete," *British Ceramic Transactions*, V101 (N1):30-34, Feb 2002.
94. Zhang, J., P.J.M. Monteiro, and F. Morrison, "Non Invasive surface measurement of the corrosion impedance of rebar in concrete. Part II: forward modeling," *ACI Materials Journal*, V99 (N3):242-249, May-June 2002.
95. Hashin, Z., P.J.M. Monteiro, An Inverse Method to Determine the Elastic Properties of the Interphase Between Aggregate Particles and Cement Paste Matrix, *CEMENT AND CONCRETE RESEARCH*, AUG, 2002, V32(N8):1291-1300
96. Corr, DJ; Lebourgeois, J; Monteiro, PJM; Bastacky, SJ; Gartner, EM., Air void morphology in fresh cement pastes. *CEMENT AND CONCRETE RESEARCH*, JUL, 2002, V32(N7):1025-1031.
97. T.I Zohdi, P.J.M. Monteiro, and V. Lamour, Extraction of elastic moduli from granular compacts, *International Journal of Fracture*, 115, 49-54, 2002.
98. S. K. Deb, M. H. Manghnani, K. Ross, R. A. Livingston, P. J. M. Monteiro, Raman scattering and X-ray diffraction study of the thermal decomposition of an ettringite-group crystal, *Phys Chem Minerals* (2003) 30: 31 – 38.
99. F. A. Rodrigues, , P. J. M. Monteiro, and G. Sposito A Reply to Discussion of the Paper "The Alkali-silica Reaction: The Effect Of Monovalent And Bivalent Cations On The Surface Charge Of Opal, *Cement and Concrete Research*, 933-934, 2003.
100. Monteiro, P.J.M. and K.E. Kurtis, Time to Failure for Concrete Exposed to Severe Sulfate Attack, *Cement and Concrete Research*, 33, 987-993, 2003.
101. K.E. Kurtis and P.J.M. Monteiro, Chemical additives to control expansion of alkali-silica reaction gel: proposed mechanisms of control, *Journal of Materials Science*, 38, 2027-2036, (2003).

102. M.C.G. Juenger, V. Lamour, P.J.M. Monteiro, E.M.Gartner, G.P. Denbeaux Direct Observation of Cement Hydration by X-ray microscopy *Journal of Materials Science Letters* **22**, 2003, 1335 – 1337.
103. D.J. Corr, P.J.M. Monteiro, J. Bastacky, Ice Lens Formation and Frost Heave in Young Portland Cement Paste”, V. 33, 10, 1531-1538, 2003
104. L. Turanli, F. Bektas, P.J.M. Monteiro, Use of Ground Clay Brick as a Pozzolanic Material to Reduce the Alkali-Silica Reaction” V. 33, 10, 1539-1542, 2003.
105. Hubbard SS. Zhang JY. Monteiro PJM. Peterson JE. Rubin Y. Experimental detection of reinforcing bar corrosion using nondestructive geophysical techniques. *ACI Materials Journal*. 100(6):501-510, 2003 Nov-Dec.
106. Harutyunyan VS. Abovyan ES. Monteiro PJM. X-ray diffraction investigations of deformations and dislocation configuration in calcium hydroxide crystallites of concrete. *Physica Status Solidi A-Applied Research*. 200(2):307-325, 2003 Dec.106.
107. Harutyunyan VS. Abovyan ES. Monteiro PJM. Mkrtchyan VP. Balyan MK. Aivazyan AP. X-ray diffraction investigations of microstructure of calcium hydroxide crystallites in the interfacial transition zone of concrete. *Journal of the American Ceramic Society*. 86(12):2162-2166, 2003 Dec.
108. K. Shomglin, L. Turanli, H. -R. Wenk, P. J. M. Monteiro and G. Sposito The effects of potassium and rubidium hydroxide on the alkali–silica reaction, *Cement and Concrete Research*, Volume 33, Issue 11, November 2003, Pages 1825-1830
109. B.P. DiPaolo, P. J. M. Monteiro, and R. Gronsky, Quasi-static axial crush response of a thin-wall, stainless steel box component, *International Journal of Solids and Structures* 41(14):3707-3733, 2004.
110. J. Zhang, P. J. M. Monteiro, and F. Morrison, M. Mancio, Non Invasive Surface Measurement of the Corrosion Impedance of Rebar in Concrete. Part III: Effect of Geometry and Material Properties, *ACI materials journal*, Vol 101, No. 4, 273, 2004.
111. J.Ryou and P.J.M. Monteiro, Electrodeposition as a rehabilitation method for concrete materials, *Canadian Journal of Civil Engineering*, *Canadian Journal of Civil Engineering*, Volume 31, Number 5, 776-781, 2004.
112. V. A. Paulon, D. Dal Molin, P.J.M. Monteiro, Statistical analysis of the effect of mineral admixtures on the strength of the interfacial transition zone, *Interface Science Journal*, 12 399-410, 2004.
113. David J. Corr, Maria C. G. Juenge, Paulo J. M. Monteiro, J. Bastacky, Investigating Entrained Air Voids and Portland Cement Hydration with Low-Temperature Scanning Electron Microscopy, 26 (2004) 1007–1012, *Cement and Concrete Composites*.
114. M.C.G. Juenger, Paulo J.M. Monteiro, E.M.Gartner, G.P. Denbeau, A soft x-ray microscope investigation into the effects of calcium chloride on tricalcium silicate hydration *Cement & Concrete Research*. v 35 n 1 January 2005. p 19-25.
115. P. J. M. Monteiro, P. R. L. Helene, I. V. Aoki, P. E. Barbosa, E. B. Monteiro INFLUENCE OF THE WATER-TO-CEMENT RATIO AND COVER THICKNESS ON THE CHLORIDE EXTRACTION OF CORRODED CONCRETE *ACI materials journal*, Vol. 102, No. 1, 9-14, January 2005.

116. David Trejo and Paulo J. Monteiro, Corrosion Performance of Conventional Reinforcing Bars Embedded in Concrete and Exposed to Chloride Solution, *Cement and Concrete Research*, Volume 35, Issue 3, March 2005, Pages 562-571.
117. D. A. Silva and P. J. M. Monteiro, Hydration evolution of C₃S–EVA composites analyzed by soft X-ray microscopy, *Cement and Concrete Research*, Volume 35, Issue 2, February 2005, Pages 351-357
118. Xiaoqiang Hou, Leslie J. Struble, Paulo J.M. Monteiro, R. James Kirkpatrick, Structural Investigations of Alkali Silicate Gels, *JOURNAL OF THE AMERICAN CERAMIC SOCIETY* 88 (4): 943-949 APR 2005.
119. T Saeki and P. J. M. Monteiro, A model to predict the amount of calcium hydroxide in concrete containing mineral admixtures *Cement and Concrete Research*, v 35, n 10, October, 2005, p 1914-1921
120. D.A. Silva and P.J.M. Monteiro, ESEM analysis of polymeric film in EVA-modified cement paste, *Cement and Concrete Research* 35 (10): 2047-2050 OCT 2005.
121. D.A. Silva and P.J.M. Monteiro, Analysis of C₃A hydration using soft X-rays transmission microscopy: Effect of EVA copolymer, *Cement and Concrete Research* 35 (10): 2026-2032 OCT 2005
122. Bektas F, Turanlı L, Monteiro PJM, Use of Perlite Powder to Suppress the Alkali-Silica Reaction, *Cement and Concrete Research* 35 (10): 2014-2017 OCT 2005.
123. Ryou J, Monteiro PJM, Surface coating of concrete materials by deposition process, *Surface Review and Letters*, 12 (2): 233-237 APR 2005.
124. D.A. Silva, R. Wenk, and P.J.M. Monteiro, Comparative investigation of mortars from Roman Colosseum and cistern, *Thermochimica Acta* v 438, n 1-2, Nov 1, 2005, p 35-40.
125. P.J.M. Monteiro, Olivier Coussy, Denise A. Silva, Effect of cryo-suction and air void transition layer on the hydraulic pressure developed during freezing of concrete, *ACI Materials Journal*, V. 103, No.2, 136-140, 2006.
126. P. J. M., Monteiro, Scaling and saturation laws for the expansion of concrete exposed to sulfate attack, *PNAS* 2006 103: 11467-11472.
127. H. Amick and P. J. M. Monteiro, “Experimental Determination of Modal Damping in Concrete Beams,” *Materials Journal of the American Concrete Institute*, May-June 2006, pp. 153-160.
128. K. Wang, P.R.L. Helene, P.J.M. Monteiro, Potential Use of Zinc in the Repair of Corroded Reinforced Concrete, *Cement & Concrete Composites*, 707-715, 28, 2006.
129. D.A. Silva and P.J.M. Monteiro, The influence of polymers on the hydration of portland cement phases analyzed by soft X-ray transmission microscopy, *Cement and Concrete Research* 36 (8): 1501-1507 AUG 2006.
130. C.E. Tambelli, J.F. Schneider, N.P.Hasparyk and P.J.M. Monteiro, Study of the Structure of Alkali-Silica Reaction Gel by High-Resolution NMR Spectroscopy, *Journal of Non-Crystalline Solids*, 352 (32-35): 3429-3436 SEP 15 2006.
131. M.C. Garci Juenger, P.J.M. Monteiro, and E.M. Gartner In situ imaging of ground granulated blast furnace slag hydration, *Journal of Material Science*, 41 (21): 7074-7081 NOV 2006.

132. N. Segre, C.P. Ostertag, P.J.M. Monteiro Effect of Tire Rubber Particles on Crack Propagation in Cement Paste, *Materials Research*, Vol. 9, No. 3, 311-320, 2006.
133. F. Vossoughi, C.P. Ostertag, P.J.M. Monteiro, G.C. Johnson, "Resistance of Concrete Protected by Fabric to Projectile Impact," *Cement and Concrete Research* 37 (2007) 96–106
134. D.A. Silva and P.J.M. Monteiro, Early formation of ettringite in tricalcium aluminate – calcium hydroxide – gypsum dispersions, *J. Am. Ceram. Soc.*, 90 [2] 614–617 (2007).
135. C.P. Ostertag, Ck. Yi and P.J.M. Monteiro, "Effect of Confinement on the Properties and Characteristics of the Alkali-Silica Reaction Gel," *ACI Materials Journal*, 104 (3): 276-282 MAY-JUN 2007.
136. F. Vossoughi, C.P. Ostertag and P. J. M. Monteiro, Damage Characterization in Concrete Panels Due to Impact Loading by Motionless X-ray Laminography," *Journal of Material Science*, 42 (9): 3280-3285 MAY 2007.
137. Olivier Coussy and Paulo J.M. Monteiro, Unsaturated poroelasticity for crystallization in pores, *Computers and Geotechnics* 34 (2007) 279–290.
138. O. Coussy and P. J.M. Monteiro, Poroelastic model for concrete exposed to freezing temperatures, *Cement and Concrete Research*, Volume: 38, 40-48, 2008.
139. S.M. Clark, B. Colas, M. Kunz, S. Speziale, P.J.M. Monteiro, Effect of pressure on the crystal structure of ettringite, *Cement and Concrete Research*, 19-26, 2008.
140. H.-R. Wenk, P.J.M. Monteiro and K. Shomglin, Relationship between aggregate microstructure and concrete expansion. A case study of deformed granitic rocks from the Santa Rosa Mylonite Zone, *JOURNAL OF MATERIALS SCIENCE*, Volume: 43, 1278-1285, 2008.
141. P.J.M. Monteiro and K.E. Kurtis, Experimental asymptotic analysis of expansion of concrete exposed to sulfate attack, *ACI Materials Journal*, Volume: 105, 62-71, 2008.
142. J. Marques Filho, V. A. Paulon, P. Monteiro, W. P. Andrade, D. D. Molin, Laboratory Device to Simulate Roller-Compacted Concrete Placement, *ACI Materials Journal*, Volume: 105 Issue: 2 Pages: 125-130 Published: MAR-APR 2008.
143. A. Fabbri, O. Coussy, T. Fen-Chong and P.J.M. Monteiro, Are Deicing Salts Necessary to Promote Scaling in Concrete? *Journal of Engineering Mechanics – ASCE*, Volume: 134 Issue: 7 Pages: 589-598, JUL 2008.
144. S. Speziale, F. Jiang, Z. Mao, P. J.M. Monteiro, H. Wenk, T. S. Duffy, F. Schilling. Single-crystal elastic constants of natural ettringite, *CEMENT AND CONCRETE RESEARCH* Volume: 38 Issue: 7 Pages: 885-889, JUL 2008
145. H.N. Atahan, C. Carlos Jr, S. Chae, P. J. M. Monteiro, J. Bastacky, THE MORPHOLOGY OF ENTRAINED AIR VOIDS IN HARDENED CEMENT PASTE GENERATED WITH DIFFERENT ANIONIC SURFACTANTS, *Cement & Concrete Composites* 30 (2008) 566–575.
146. M. Mancio, C. Cruz, J. Zhang, J. Harvey, P.J.M. Monteiro, Evaluation of Corrosion Resistance of Steel Dowels used for Concrete Pavements, *ASCE Materials*, Volume: 20 Issue: 10 Pages: 650-658, 2008.
147. S. Speziale, H.J. Reichmann, F. Schilling, H.R. Wenk, P.J.M. Monteiro, Determination of the elastic constants of portlandite by Brillouin spectroscopy, *CCR*, Volume 38 10 1148-1153, 2008

148. K. Wakimoto, J. Blunt, P. J. M. Monteiro, C. P. Ostertag, R. Albert- Digital Laminography Assessment of the Damage in Concrete Exposed to Freezing Temperatures, CCR, Volume: 38 Issue: 10 Pages: 1232-1245 Published: OCT 2008
149. J.F. Schneider, N.P.Hasparyk D. A. Silva and P.J.M. Monteiro, Effect of Lithium Nitrate on the ASR Gel, American Ceramics Society, Volume: 91 Issue: 10 Pages: 3370-3374 Published: OCT 2008.
150. Jiaying Zhang, Daniel Cusson; Paulo J.M. Monteiro, John Harvey, New Perspectives on Maturity Method and Innovative Approach for High Performance Concrete Applications, CCR, **Volume 38, Issue 12**, Pages 1438-1446, 2008.
151. Harutyunyan V., Kirchheim A.P., Monteiro, P.J.M., INVESTIGATION OF EARLY GROWTH OF CALCIUM HYDROXIDE CRYSTALS IN CEMENT SOLUTION BY SOFT X-RAY TRANSMISSION MICROSCOPY, J Mater Sci (2009) 44:962–969.
152. O. Coussy and P.J.M. Monteiro, Errata to “Poroelastic model for concrete exposed to freezing temperatures”[Cement and Concrete Research 38 (2008) 40–48], Cement and Concrete Research 39 (2009) 371–372.
153. A.P. Kirchheim, V. Fernández-Altable; P.J. M.Monteiro, Denise C Dal Molin,; Ignasi Casanova, Analysis of cubic and orthorhombic C(3)A hydration in presence of gypsum and lime, Journal of Materials Science: Volume 44, Issue8 (2009), Page 2038.
154. P.J.M. Monteiro, A.P. Kirchheim, S. Chae, P. Fischer, A.A. MacDowell, E. Schaible, H.R. Wenk, Characterizing the nano and micro structure of concrete to improve its durability, Cement & Concrete Composites 31 (2009) 577–584.
155. Sejin CHOI, Paulo J M. MONTEIRO, Moohan KIM, EFFECTS OF STONE POWDER SLUDGE ON THE STRENGTH AND MICROSTRUCTURE OF ALKALI-ACTIVATED FLY ASH PASTES, Japan Concrete Institute, Vol.31 , No.1, 2009.
156. Mancio M., Kusinski G., Monteiro P.J.M. and Devine T.M., Electrochemical and in-situ SERS Study of Passive Film Characteristics and Corrosion Performance of 9%Cr Microcomposite Steel in Highly Alkaline Environments, Journal of ASTM International, Vol. 6, No. 5, May 2009.
157. Hans-Rudolf Wenk, Paulo J. M. Monteiro, Martin Kunz, Kai Chen, Nobumichi Tamura, Luca Lutterotti and John Delacroz, Preferred orientation of ettringite in concrete fractures, **J. Appl. Crystallography**, Volume: 42 Pages: 429-432 Part: Part 3, JUN 2009.
158. Hasparyk NP, Monteiro PJM, Dal Molin DCC, Investigation of Mechanical Properties of Concrete Affected by Alkali-Aggregate Reaction, ASCE materials Journal, Volume: 21 Issue: 6 Pages: 294-297, JUN 2009.
159. K. Karhunen, A. Seppänen, A. Lehikoinen, P.J.M. Monteiro, J. P. Kaipio, Electrical Resistance Tomography Imaging of Concrete, Cement and Concrete Research, Volume: 40 Issue: 1 Pages: 137-145, 2010
160. Jae Eun Oh; Paulo Monteiro; Ssang Sun Jun; Sejin Choi; Simon Clark, The evolution of strength and crystalline phases for alkali activated ground blast furnace slag and fly ash-based geopolymers, Cement and Concrete Research, Volume: 40 Issue: 2 Pages: 189-196, 2010.

161. C. Benmore and Monteiro P.J.M., The structure of alkali silicate gel by total scattering methods, *Cement and Concrete Research*, Volume 40, Issue 6, 2010, Pages 892-897.
162. L. Skinner, S. R. Chae, C. J. Benmore H. R. Wenk & P. J. M. Monteiro Nanostructure of Calcium-Silicate-Hydrates in Cements, *Physics Review Letters*, **104**, 195502 (2010).
163. J. Ha, S. Chae, K. W. Chou, T. Tylicszak, and P.J.M. Monteiro, Scanning transmission x-ray microscopic (STXM) study of carbonated CSH *Journal of the Transportation Research Record*, No. 2142, page 83-88, 2010.
164. K. Karhunen, A. Seppänen, A. Lehtikoinen, J. Blunt, J. P. Kaipio, and P. J. M. Monteiro, Electrical Resistance Tomography for Assessment of Cracks in Concrete, *ACI Materials Journal*, V. 107, No. 5, 523-531, September-October 2010.
165. Se Jin Choi, Ssang Sun Jun, Jae Eun Oh and Paulo J. M. Monteiro, Properties of alkali-activated systems with stone powder sludge, *Journal of Material Cycles and Waste Management*, Volume 12, 2010, Number 4, 275-282.
166. G. I. Barenblatt and P. J. M. Monteiro, Scaling Laws in Nanomechanics, *Physical Mesomechanics*, 13, 245-248 (2010).
167. M. Mancio, J. R. Moore, Z. Brooks, P. J. M. Monteiro, S. D. Glaser, : Instantaneous In-Situ Determination of Water-Cement Ratio of Fresh Concrete, *ACI materials Journal* (2010), 107, 587-593.
168. S. Xiao, H. Li and P. J. M. Monteiro, Influence of strain rates and load histories on the tensile damage behaviour of concrete, *Magazine of Concrete Research*, 2010, 62, No. 12, December, 887–894.
169. J.E. Oh, J. Moon, M. Mancio, S.M. Clark, P.J.M. Monteiro, Bulk Modulus of Basic Sodalite, $\text{Na}_8[\text{AlSiO}_4]_6(\text{OH})_2 \cdot 2\text{H}_2\text{O}$, a possible zeolitic precursor in coal fly ash-based geopolymers, *Cement and Concrete Research* 41 (2011) 107–112.
170. J.E. Oh, J. Moon, S.M. Clark, P.J.M. Monteiro, Does the Al substitution in CSH (I) Change Its Mechanical Property? *Cement and Concrete Research* 41 (2011) 102–106.
171. Kirchheim, A. P., Dal Molin, D.; Provis, J.; Emwas, Abdul-Hamid; Fischer, Peter; Monteiro, P.J.M., Real-time high-resolution X-ray imaging and nuclear magnetic resonance study of the hydration of pure and Na-doped C3A in the presence of sulfates, *Inorganic Chemistry*, 50, 4 (2011) 1203-1212.
172. J. Moon, J. E. Oh, M. Balonis, F. P. Glasser, S.M. Clark and Paulo J.M. Monteiro, Pressure induced reactions amongst calcium aluminate hydrate phases, *Cement and Concrete Research* 41 (2011) 571–578.
173. C. Meral, C.J. Benmore and Paulo J.M. Monteiro, The study of disorder and nanocrystallinity in C-S-H, supplementary cementitious materials and geopolymers using pair distribution function analysis, *Cement and Concrete Research*, 41, 696-710, 2011.
174. J.E. Oh, J. Moon, S.M. Clark, P.J.M. Monteiro, Determination of the bulk modulus of hydroxycancrinite, a possible zeolitic precursor in geopolymers, by high-pressure synchrotron X-ray diffraction, *Cement and Concrete Composite*, Volume 33, Issue 10, November 2011, Pages 1014-1019.

175. J. Moon, J. E. Oh, M. Balonis, F. P. Glasser, S.M. Clark and Paulo J.M. Monteiro, High Pressure Study of Low Compressibility Tetracalcium Aluminum Carbonate Hydrates $3\text{CaO}\cdot\text{Al}_2\text{O}_3\cdot\text{CaCO}_3\cdot 11\text{H}_2\text{O}$, *Cement and Concrete Research* 42 (2012) 105–110.
176. Juyoung Ha ;Sejung Chae; Kang Wei Chou; Tolek Tyliszczka; Paulo J. Monteiro, Effect of polymers on the nanostructure and on the carbonation of calcium silicate hydrates: A scanning transmission x-ray microscopy study, *Journal of Material Science*, Volume: 47 Issue: 2 Pages: 976-989 Published: JAN 2012.
177. Sezen Soyer-Uzun, Sejung Rosie Chae, Chris J. Benmore, Hans-Rudolf Wenk, Paulo J. M. Monteiro, Compositional Evolution of Calcium Silicate Hydrate (C-S-H) Structures by Total X-Ray Scattering, *Journal of the American Ceramic Society*, Volume: 95 Issue: 2 Pages: 793-798, FEB 2012
178. J.E. Oh, Simon M. Clark , H.-R. Wenk and P.J.M. Monteiro, Experimental Determination of Bulk Modulus of 14\AA Tobermorite Using High Pressure Synchrotron X-ray Diffraction, *CCR*, Volume 42, Issue 2, February 2012, Pages 397-403.
179. S. Brisard, R. S. Chae, I. Bihannic, L. Michot, P. Guttman, J. Thieme, G. Schneider, P.J.M. Monteiro and P. Levitz, Morphological quantification of hierarchical geomaterials by x-ray nano-CT bridges the gap from nano to micro length-scales, *American Mineralogist*, 97 2-3 480-483, FEB-MAR 2012.
180. J.E. Oh, Juhyuk Moon, Sang-Gyun Oh, Simon M. Clark and Paulo J.M. Monteiro Microstructural and compositional change of NaOH-activated high calcium fly ash by incorporating Na-aluminate and co-existence of geopolymeric gel and C-S-H(I), *Cement and Concrete Research*, Volume 42, Issue 5, Pages 673–685, May 2012.
181. Choi Se Jin; Lee Sang Soo; Monteiro Paulo J. M., Effect of Fly Ash Fineness on Temperature Rise, Setting, and Strength Development of Mortar, *JOURNAL OF MATERIALS IN CIVIL ENGINEERING* Volume: 24 Pages: 499-505 MAY 2012
182. Seyoon Yoon, Sang-gyun Oh, Juyoung Ha, Paulo J. M. Monteiro The Effects of Surface Treatments on Rapid Chloride Permeability Tests, *Materials Chemistry and Physics* 135 (2012) 699-708.
183. Battocchio, F., Monteiro, P. J. M., & Wenk, H. R. (2012). Rietveld refinement of the structures of 1.0 C-S-H and 1.5 C-S-H. *Cement and Concrete Research*, 42(11), 1534-1548. doi:[10.1016/j.cemconres.2012.07.005](https://doi.org/10.1016/j.cemconres.2012.07.005)
184. Tiecher, F., Coitinho Dal Molin, D. C., Boscato Gomes, M. E., Hasparyk, N. P., & Monteiro, P. J. M. (2012). Influence of mesostasis in volcanic rocks on the alkali-aggregate reaction. *CEMENT & CONCRETE COMPOSITES*, 34(10), 1130-1140. doi:[10.1016/j.cemconcomp.2012.07.009](https://doi.org/10.1016/j.cemconcomp.2012.07.009)
185. Moon, J., Yoon, S., Wentzcovitch, R. M., Clark, S. M., & Monteiro, P. J. M. (2012). Elastic properties of tricalcium aluminate from high-pressure experiments and first-principles calculations. *Journal of the American Ceramic Society*, 95(9), 2972-2978. doi:[10.1111/j.1551-2916.2012.05301.x](https://doi.org/10.1111/j.1551-2916.2012.05301.x)
186. Manzano, H., Ayuela, A., Telesca, A., Monteiro, P. J. M., & Dolado, J. S. (2012). Ettringite Strengthening at High Pressures Induced by the Densification of the

- Hydrogen Bond Network. *JOURNAL OF PHYSICAL CHEMISTRY C*, 116(30), 16138-16143. doi:[10.1021/jp301822e](https://doi.org/10.1021/jp301822e)
187. Monteiro, P. J. M., Rycroft, C. H., & Barenblatt, G. I. (2012). A mathematical model of fluid and gas flow in nanoporous media. *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*, 109(50), 20309-20313. doi:[10.1073/pnas.1219009109](https://doi.org/10.1073/pnas.1219009109)
188. Amick, H., & Monteiro, P. J. M. (2013). Temperature and Frequency Effects on Properties of Polymer-Modified Concrete. *ACI MATERIALS JOURNAL*, 110(2), 187-195
189. Monteiro, P. J. M., Clodic, L., Battocchio, F., Kanitpanyacharoen, W., Chae, S. R., Ha, J., & Wenk, H. R. (2013). Incorporating carbon sequestration materials in civil infrastructure: A micro and nano-structural analysis. *Cement and Concrete Composites*, 40, 14-20. doi:[10.1016/j.cemconcomp.2013.03.013](https://doi.org/10.1016/j.cemconcomp.2013.03.013)
190. Chae, S. R., Moon, J., Yoon, S., Bae, S., Levitz, P., Winarski, R., & Monteiro, P. J. M. (2013). Advanced Nanoscale Characterization of Cement Based Materials Using X-Ray Synchrotron Radiation: A Review. *INTERNATIONAL JOURNAL OF CONCRETE STRUCTURES AND MATERIALS*, 7(2), 95-110. doi:[10.1007/s40069-013-0036-1](https://doi.org/10.1007/s40069-013-0036-1)
191. Hargis, C. W., Kirchheim, A. P., Monteiro, P. J. M., & Gartner, E. M. (2013). Early age hydration of calcium sulfoaluminate (synthetic ye'elinite, C(4)A(3)(S)overbar) in the presence of gypsum and varying amounts of calcium hydroxide. *CEMENT AND CONCRETE RESEARCH*, 48, 105-115. doi:[10.1016/j.cemconres.2013.03.001](https://doi.org/10.1016/j.cemconres.2013.03.001)
192. Jackson, M. D., Moon, J., Gotti, E., Taylor, R., Chae, S. R., Kunz, M, C. Meral, Guttman P., P. Levitz, Wenk H.-R., Monteiro P. J. M (2013)., Material and elastic properties of Al-tobermorite in ancient roman seawater concrete. *Journal of the American Ceramic Society*, 96(8), 2598-2606. doi:[10.1111/jace.12407](https://doi.org/10.1111/jace.12407)
193. Hargis, C. W., Juenger, M. C. G., & Monteiro, P. J. M. (2013). Aggregate Passivation: Lithium Hydroxide Aggregate Treatment to Suppress Alkali-Silica Reaction. *ACI MATERIALS JOURNAL*, 110(5), 567-575.
194. Pignatelli, R., Comi, C., & Monteiro, P. J. M. (2013). A coupled mechanical and chemical damage model for concrete affected by alkali-silica reaction. *CEMENT AND CONCRETE RESEARCH*, 53, 196-210. doi:[10.1016/j.cemconres.2013.06.011](https://doi.org/10.1016/j.cemconres.2013.06.011)
195. Moon, J., Speziale, S., Meral, C., Kalkan, B., Clark, S. M., & Monteiro, P. J. M. (2013). Determination of the elastic properties of amorphous materials: Case study of alkali-silica reaction gel. *Cement and Concrete Research*, 54, 55-60. doi:[10.1016/j.cemconres.2013.08.012](https://doi.org/10.1016/j.cemconres.2013.08.012)
196. Jackson, M. D., Chae, S. R., Mulcahy, S. R., Meral, C., Taylor, R., J. Moon., P. Li, Emwas A. M., Vola G., Wenk, H.-R. and Monteiro, P. J. M., Unlocking the secrets of Al-tobermorite in Roman seawater concrete (2013). *American Mineralogist*, 98(10), 1669-1687. doi:[10.2138/am.2013.4484](https://doi.org/10.2138/am.2013.4484)
197. Yoon, S., & Monteiro, P. J. M. (2013). Molecular Dynamics Study of Water Molecules in Interlayer of 14 angstrom Tobermorite. *JOURNAL OF ADVANCED CONCRETE TECHNOLOGY*, 11(6), 180-188. doi:[10.3151/jact.11.180](https://doi.org/10.3151/jact.11.180)

198. Hargis, C. W., Moon, J., Lothenbach, B., Winnefeld, F., Wenk, H. R., & Monteiro, P. J. M. (2014). Calcium sulfoaluminate sodalite (Ca₄Al₆O₁₂SO₄) crystal structure evaluation and bulk modulus determination. *Journal of the American Ceramic Society*, 97(3), 892-898. doi:[10.1111/jace.12700](https://doi.org/10.1111/jace.12700)
199. Celik, K., Jackson, M. D., Mancio, M., Meral, C., Emwas, A. H., Mehta, P. K., & Monteiro, P. J. M. (2014). High-volume natural volcanic pozzolan and limestone powder as partial replacements for portland cement in self-compacting and sustainable concrete. *Cement and Concrete Composites*, 45, 136-147. doi:[10.1016/j.cemconcomp.2013.09.003](https://doi.org/10.1016/j.cemconcomp.2013.09.003)
200. Barenblatt, G. I., Monteiro, P. J. M., & Rycroft, C. H. (2014). On a boundary layer problem related to the gas flow in shales. *JOURNAL OF ENGINEERING MATHEMATICS*, 84(1), 11-18. doi:[10.1007/s10665-012-9612-7](https://doi.org/10.1007/s10665-012-9612-7)
201. Collodetti, G., Gleize, P. J. P., & Monteiro, P. J. M. (2014). Exploring the potential of siloxane surface modified nano-SiO₂ to improve the Portland cement pastes hydration properties. *CONSTRUCTION AND BUILDING MATERIALS*, 54, 99-105. doi:[10.1016/j.conbuildmat.2013.12.028](https://doi.org/10.1016/j.conbuildmat.2013.12.028)
202. Han, S. J., Lee, D. H., Kim, K. S., Seo, S. Y., Moon, J., & Monteiro, P. J. M. (2014). Degradation of flexural strength in reinforced concrete members caused by steel corrosion. *Construction and Building Materials*, 54, 572-583. doi:[10.1016/j.conbuildmat.2013.12.101](https://doi.org/10.1016/j.conbuildmat.2013.12.101)
203. Yoon, S., Monteiro, P. J. M., Macphee, D. E., Glasser, F. P., & Imbabi, M. S. -E. (2014). Statistical evaluation of the mechanical properties of high-volume class F fly ash concretes. *CONSTRUCTION AND BUILDING MATERIALS*, 54, 432-442. doi:[10.1016/j.conbuildmat.2013.12.077](https://doi.org/10.1016/j.conbuildmat.2013.12.077)
204. Hernandez-Cruz, D., Hargis, C. W., Bae, S., Itty, P. A., Meral, C., Dominowski, J Radler, M.J., Kilcoyne D, Monteiro P.J.M, Multiscale characterization of chemical-mechanical interactions between polymer fibers and cementitious matrix. *CEMENT & CONCRETE COMPOSITES*, 48, 9-18. doi:[10.1016/j.cemconcomp.2014.01.001](https://doi.org/10.1016/j.cemconcomp.2014.01.001)
205. Yoon, S., Ha, J., Chae, S. R., Kilcoyne, D. A., & Monteiro, P. J. M. (2014). X-ray spectromicroscopic study of interactions between NaCl and calcium silicate hydrates. *MAGAZINE OF CONCRETE RESEARCH*, 66(3), 141-149. doi:[10.1680/mac.13.00244](https://doi.org/10.1680/mac.13.00244)
206. Itty, P. -A., Serdar, M., Meral, C., Parkinson, D., MacDowell, A. A., Bjegovic, D., & Monteiro, P. J. M. (2014). In situ 3D monitoring of corrosion on carbon steel and ferritic stainless steel embedded in cement paste. *CORROSION SCIENCE*, 83, 409-418. doi:[10.1016/j.corsci.2014.03.010](https://doi.org/10.1016/j.corsci.2014.03.010)
207. Bae, S., Meral, C., Oh, J. -E., Moon, J., Kunz, M., & Monteiro, P. J. M. (2014). Characterization of morphology and hydration products of high-volume fly ash paste by monochromatic scanning x-ray micro-diffraction (□m-SXRD). *CEMENT AND CONCRETE RESEARCH*, 59, 155-164. doi:[10.1016/j.cemconres.2014.03.001](https://doi.org/10.1016/j.cemconres.2014.03.001)
208. Moon, J., Yoon, S., Wentzcovitch, R. M., & Monteiro, P. J. M. (2014). First-principles elasticity of monocarboaluminate hydrates. *AMERICAN MINERALOGIST*, 99(7), 1360-1368. doi:[10.2138/am.2014.4597](https://doi.org/10.2138/am.2014.4597)

209. Hargis, C. W., Telesca, A., & Monteiro, P. J. M. (2014). Calcium sulfoaluminate (Ye'elimite) hydration in the presence of gypsum, calcite, and vaterite. *CEMENT AND CONCRETE RESEARCH*, 65, 15-20. doi:[10.1016/j.cemconres.2014.07.004](https://doi.org/10.1016/j.cemconres.2014.07.004)
210. Celik, K., Meral, C., Mancio, M., Mehta, P. K., & Monteiro, P. J. M. (2013). A comparative study of self-consolidating concretes incorporating high-volume natural pozzolan or high-volume fly ash. *Construction and Building Materials*. doi:[10.1016/j.conbuildmat.2013.11.065](https://doi.org/10.1016/j.conbuildmat.2013.11.065) [based on conference paper #63].
211. Telesca, A., Marroccoli, M., Pace, M. L., Tomasulo, M., Valenti, G. L., & Monteiro, P. J. M. (2014). A hydration study of various calcium sulfoaluminate cements. *CEMENT & CONCRETE COMPOSITES*, 53, 224-232. doi:[10.1016/j.cemconcomp.2014.07.002](https://doi.org/10.1016/j.cemconcomp.2014.07.002)
212. Moon, J., Celik, K., Yoon, S., Kim, K. H., Kim, K. S., & Monteiro, P. J. M. (2014). Characterization of natural pozzolan-based geopolymeric binders. *Cement and Concrete Composites*, 53, 97-104. doi:[10.1016/j.cemconcomp.2014.06.010](https://doi.org/10.1016/j.cemconcomp.2014.06.010)
213. [Yoon, S](#) ; [Moon, J](#) ; [Bae, S](#) ; [Duan, XN](#) ; [Giannelis, EP](#) ; [Monteiro, PM](#) Chloride adsorption by calcined layered double hydroxides in hardened Portland cement paste, *Materials chemistry and physics* (2014) volume: 145 issue: 3 page: 376 -386.
214. Jackson, M. D., Landis, E. N., Brune, P. F., Vitti, M., Chen, H., Q. Li, M. Kunz, H.R. Wenk, P.J.M. Monteiro, A. Ingraffea, Mechanical resilience and cementitious processes in Imperial Roman architectural mortar (2014). *Proceedings of the National Academy of Sciences of the United States of America*, 111(52), 18484-18489. doi:[10.1073/pnas.1417456111](https://doi.org/10.1073/pnas.1417456111)
215. Celik, K., Meral, C., Petek Gursel, A., Mehta, P. K., Horvath, A., & Monteiro, P. J. M. (2015). Mechanical properties, durability, and life-cycle assessment of self-consolidating concrete mixtures made with blended portland cements containing fly ash and limestone powder. *Cement and Concrete Composites*, 56, 59-72. doi:[10.1016/j.cemconcomp.2014.11.003](https://doi.org/10.1016/j.cemconcomp.2014.11.003)
216. Moon, J., Yoon, S., & Monteiro, P. J. M. (2015). Mechanical properties of jennite: A theoretical and experimental study. *CEMENT AND CONCRETE RESEARCH*, 71, 106-114. doi:[10.1016/j.cemconres.2015.02.005](https://doi.org/10.1016/j.cemconres.2015.02.005)
217. Taylor, R., Sakdinawat, A., Chae, S. R., Wenk, H. R., Levitz, P., Sougrat, R., & Monteiro, P. J. M. (2015). Developments in TEM Nanotomography of Calcium Silicate Hydrate. *Journal of the American Ceramic Society*, 98(7), 2307-2312. doi:[10.1111/jace.13585](https://doi.org/10.1111/jace.13585)
218. Eckert, J., Gourdon, O., Jacob, D. E., Meral, C., Monteiro, P. J. M., Vogel, S. C., Wenk, H. -R. (2015). Ordering of water in opals with different microstructures. *EUROPEAN JOURNAL OF MINERALOGY*, 27(2), 203-213. doi:[10.1127/ejm/2015/0027-2428](https://doi.org/10.1127/ejm/2015/0027-2428)
219. Zhao, P., Jackson, M. D., Zhang, Y., Li, G., Monteiro, P. J. M., & Yang, L. (2015). Material characteristics of ancient Chinese lime binder and experimental reproductions with organic admixtures. *CONSTRUCTION AND BUILDING MATERIALS*, 84, 477-488. doi:[10.1016/j.conbuildmat.2015.03.065](https://doi.org/10.1016/j.conbuildmat.2015.03.065)
220. Jae Eun Oh, Yubin Jun, Yeonung Jeong, Paulo J.M. Monteiro, The importance of the network-modifying element content in fly ash as a simple measure to predict its

- strength potential for alkali activation, CCC, [Volume 57](#), March 2015, Pages 44–54. doi:[10.1016/j.cemconcomp.2014.12.00](#)
221. Serdar, M., Meral, C., Kunz, M., Bjegovic, D., Wenk, H. R., & Monteiro, P. J. M. (2015). Spatial distribution of crystalline corrosion products formed during corrosion of stainless steel in concrete. *Cement and Concrete Research*, *71*, 93-105. doi:[10.1016/j.cemconres.2015.02.004](#)
222. Wu, Y., Wang, J. Y., Monteiro, P. J. M., & Zhang, M. H. (2015). Development of ultra-lightweight cement composites with low thermal conductivity and high specific strength for energy efficient buildings. *Construction and Building Materials*, *87*, 100-112. doi:[10.1016/j.conbuildmat.2015.04.004](#)
223. Cho, H. C., Lee, D. H., Ju, H., Kim, K. S., Kim, K. H., & Monteiro, P. J. M. (2015). Remaining service life estimation of reinforced concrete buildings based on fuzzy approach. *Computers and Concrete*, *15*(6), 879-902. doi:[10.12989/cac.2015.15.6.879](#)
224. Geng, G., Taylor, R., Bae, S., Hernandez-Cruz, D., Kilcoyne, D. A., Emwas, A. -H., & Monteiro, P. J. M. (2015). Atomic and nano-scale characterization of a 50-year-old hydrated C3S paste. *CEMENT AND CONCRETE RESEARCH*, *77*, 36-46. doi:[10.1016/j.cemconres.2015.06.010](#)
225. Scrivener, K. L., Juilland, P., & Monteiro, P. J. M. (2015). Advances in understanding hydration of Portland cement. *CEMENT AND CONCRETE RESEARCH*, *78*, 38-56. doi:[10.1016/j.cemconres.2015.05.025](#)
226. Bae, S., Taylor, R., Hernandez-Cruz, D., Yoon, S., Kilcoyne, D., & Monteiro, P. J. M. (2015). Soft X-ray Spectromicroscopic Investigation of Synthetic C-S-H and C3S Hydration Products. *JOURNAL OF THE AMERICAN CERAMIC SOCIETY*, *98*(9), 2914-2920. doi:[10.1111/jace.13709](#)
227. Bae, S., Taylor, R., Shapiro, D., Denes, P., Joseph, J., Celestre, R., S. Marchesini, H. Padmore, T. Tyliszczak, T. Warwick, D. Kilcoyne, P. Levitz . Monteiro, P. J. M. (2015). Soft X-ray Ptychographic Imaging and Morphological Quantification of Calcium Silicate Hydrates (C-S-H). *Journal of the American Ceramic Society*. doi:[10.1111/jace.13808](#)
228. Marinoni, N., Voltolini, M., Broekmans, M. A. T. M., Mancini, L., Monteiro, P. J. M., Rotiroti, N., Bernasconi, A. (2015). A combined synchrotron radiation micro computed tomography and micro X-ray diffraction study on deleterious alkali-silica reaction. *JOURNAL OF MATERIALS SCIENCE*, *50*(24), 7985-7997. doi:[10.1007/s10853-015-9364-7](#)
229. Miller, S. A., Horvath, A., Monteiro, P. J. M., & Ostertag, C. P. (2015). Greenhouse gas emissions from concrete can be reduced by using mix proportions, geometric aspects, and age as design factors. *Environmental Research Letters*, *10*(11). doi:[10.1088/1748-9326/10/11/114017](#)
230. Li, Q., Ge, Y., Geng, G., Bae, S., & Monteiro, P. J. M. (2015). CaCl₂-accelerated hydration of tricalcium silicate: A STXM study combined with ²⁹Si MAS NMR. *Journal of Nanomaterials*, *2015*. doi:[10.1155/2015/215371](#)
- 231 Ha, J., Chae, S., Chou, K. W., Tyliszczak, T., & Monteiro, P. J. M. (2016). Characterization of Class F Fly Ash Using STXM: Identifying Intraparticle Heterogeneity at Nanometer Scale. *JOURNAL OF NANOMATERIALS*. doi:[10.1155/2016/8072518](#)

232. Leite, M. B., & Monteiro, P. J. M. (2016). Microstructural analysis of recycled concrete using X-ray microtomography. *CEMENT AND CONCRETE RESEARCH*, 81, 38-48. doi:[10.1016/j.cemconres.2015.11.010](https://doi.org/10.1016/j.cemconres.2015.11.010)
233. Miller, S. A., Monteiro, P. J. M., Ostertag, C. P., & Horvath, A. (2016). Comparison indices for design and proportioning of concrete mixtures taking environmental impacts into account. *CEMENT & CONCRETE COMPOSITES*, 68, 131-143. doi:[10.1016/j.cemconcomp.2016.02.002](https://doi.org/10.1016/j.cemconcomp.2016.02.002)
234. Hernandez-Cruz, D., Hargis, C. W., Dominowski, J., Radler, M. J., & Monteiro, P. J. M. (2016). Fiber reinforced mortar affected by alkali-silica reaction: synchrotron microtomography. *CEMENT & CONCRETE COMPOSITES*, 68, 123-130. doi:[10.1016/j.cemconcomp.2016.02.003](https://doi.org/10.1016/j.cemconcomp.2016.02.003)
- *235. Wang, H., X. Sun, J. Wang and P.J.M. Monteiro, "Permeability of Concrete with Recycled Concrete Aggregate and Pozzolanic Materials under Stress," *Materials Journal*, March 2016, Vol. 9, doi: 10.3390/ma9040252. <http://www.mdpi.com/1996-1944/9/4/252>
236. Zhang, Y., W. Zhu, G. Liu, C. Orozco and P.J.M. Monteiro, "Effect of superplasticisers on the hydration process, products and microstructure of tricalcium aluminate paste in the presence of gypsum," *Advances in Cement Research*, May 2016, Vol. 28, Issue 5, pp. 298-309, doi:10.1680/jadcr.15.00083. <http://dx.doi.org/10.1680/jadcr.15.00083>
237. Yoon, S., J. Ha, S.R. Chae, D.A. Kilcoyne, Y. Jun, J.E. Oh and P.J.M. Monteiro, "Phase Changes of Monosulfoaluminate in NaCl Aqueous Solution," *Materials*, May 2016, Vol. 9, doi: 10.3390/ma9050401. <http://www.mdpi.com/1996-1944/9/5/401>
238. Miller, S.A., A. Horvath and P.J.M. Monteiro, "Readily implementable techniques can cut annual CO₂ emissions from the production of concrete by over 20%," *Environmental Research Letters*, July 2016, Vol. 11, Number 7, doi: 10.1088/1748-9326/11/7/074029. <http://iopscience.iop.org/article/10.1088/1748-9326/11/7/074029/meta>
239. Rheinheimer, V., S.R. Chae, E.D. Rodriguez, G. Geng, A.P. Kirchheim and P.J.M. Monteiro, "A Scanning Transmission X-ray Microscopy Study of Cubic and Orthorhombic C₃A and Their Hydration Products in the Presence of Gypsum," *Materials*, August 2016, Vol. 9, doi: 10.3390/ma9090745. <http://www.mdpi.com/1996-1944/9/9/745>
240. Han, J., K. Wang, X. Wang and P.J.M. Monteiro, D image analysis method for evaluating coarse aggregate characteristic and distribution in concrete," *Construction and Building Materials*, November 2016, Vol. 127, pp. 30-42, doi: 10.1016/j.conbuildmat.2016.09.120. <https://www.sciencedirect.com/science/article/pii/S0950061816315707?via%3Dihub>
241. Bae, S., M. Kanematsu, D. Hernández-Cruz, J. Moon, D. Kilcoyne and P.J.M. Monteiro, "In Situ Soft X-ray Spectromicroscopy of Early Tricalcium Silicate Hydration," *Materials*, December 2016, Vol. 9, doi: 10.3390/ma9120976. <http://www.mdpi.com/1996-1944/9/12/976>
242. Miller, S.A., P.J.M. Monteiro, C.P. Ostertag and A. Horvath, "Concrete mixture proportioning for desired strength and reduced global warming potential,"

- Construction and Building Materials*, December 2016, Vol. 128, pp. 410-421, doi: 10.1016/j.conbuildmat.2016.10.081.
<https://www.sciencedirect.com/science/article/pii/S0950061816316968?via%3Dihub>
243. Myers, R.J., G. Geng, J. Li, E.D. Rodrigues, J. Ha, P. Kidkhunthod, G. Sposito, L.N. Lammers, A.P. Kirchheim and P.J.M. Monteiro, "Role of Adsorption Phenomena in Cubic Tricalcium Aluminate Dissolution," *Langmuir*, December 2016, Vol. 33, pp. 45-55, doi: 10.1021/acs.langmuir.6b03474.
<https://pubs.acs.org/doi/10.1021/acs.langmuir.6b03474>
244. Rheinheimer, V., C. Unluer, J. Liu, S. Ruan, J. Pan and P.J.M. Monteiro, "XPS Study on the Stability and transformation of hydrate and Carbonate Phases within MgO Systems," January 2017, Vol. 10, doi: 10.3390/ma10010075.
<http://www.mdpi.com/1996-1944/10/1/75>
245. Bae, S., R. Taylor, D. Kilcoyne, J. Moon and P.J.M. Monteiro, "Effects of Incorporating High-Volume Fly Ash into Tricalcium Silicate on the Degree of Silicate Polymerization and Aluminum Substitution for Silicon in Calcium Silicate Hydrate," *Materials*, February 2017, Vol. 10, doi: 10.3390/ma10020131.
<http://www.mdpi.com/1996-1944/10/2/131>
246. Krishnan, P., M. Liu, P.A. Itty, Z. Liu, V. Rheinheimer, M. Zhang, P.J.M. Monteiro and L.E. Yu, "Characterization of photocatalytic TiO₂ powder under varied environments using near ambient pressure X-ray photoelectron spectroscopy," *Scientific Reports*, February 2017, Vol. 7, doi: 10.1038/srep43298.
<https://www.nature.com/articles/srep43298>
247. Geng, G., R.J. Myers, J. Li, R. Maboudian, C. Carraro, D.A. Shapiro and P.J.M. Monteiro, "Aluminum-induced dreierketten chain cross-links increase the mechanical properties of nanocrystalline calcium aluminosilicate hydrate," *Scientific Reports*, March 2017, Vol. 7, doi: 10.1038/srep44032.
<https://www.nature.com/articles/srep44032>
248. Orozco, C.A., B.W. Chun, G. Geng, A.H. Emwas and P.J.M. Monteiro, "Characterization of the Bonds Developed between Calcium Silicate Hydrate and Polycarboxylate-Based Superplasticizers with Silyl Functionalities," *Langmuir*, March 2017, Vol. 33, pp. 3404-3412, doi: 10.1021/acs.langmuir.6b04368.
<https://pubs.acs.org/doi/10.1021/acs.langmuir.6b04368>
249. Geng, G., R.J. Myers, A.L.D. Kilcoyne, J. Ha and P.J.M. Monteiro, "Ca L_{2,3}-edge near edge X-ray absorption fine structure of tricalcium aluminate, gypsum, and calcium (sulfo)aluminate hydrates," *American Mineralogist*, April 2017, Vol. 102, pp. 900-908, doi: 10.2138/am-2017-5670
<https://pubs.geoscienceworld.org/msa/ammin/article/102/4/900-908/298172>
250. Johnson, C.V., J. Chen, N.P. Hasparyk, P.J.M. Monteiro and A.T. Akono, "Fracture properties of the alkali silicate gel using microscopic scratch testing," *Cement and Concrete Composites*, May 2017, Vol. 79, pp. 71-75, doi: 10.1016/j.cemconcomp.2017.01.012.
<https://www.sciencedirect.com/science/article/pii/S0958946516302189?via%3Dihub>

251. Sum, Y.L., V. Rheinheimer, B.-H. Soong and P.J.M. Monteiro, “Scalable 2.45 GHz electrically small antenna design for metareonator array,” *The Journal of Engineering*, May 2017, Vol. 2017, doi: 10.1049/joe.2017.0015 <http://digital-library.theiet.org/content/journals/10.1049/joe.2017.0015>
252. Geng, G., J. Li, Y.-S. Yu, D.A. Shapiro, D.A. Kilcoyne and P.J.M. Monteiro, “Nanometer-Resolved Spectroscopic Study Reveals the Conversion Mechanism of $\text{CaO}\cdot\text{Al}_2\text{O}_3\cdot 10\text{H}_2\text{O}$ to $2\text{CaO}\cdot\text{Al}_2\text{O}_3\cdot 8\text{H}_2\text{O}$ and $3\text{CaO}\cdot\text{Al}_2\text{O}_3\cdot 6\text{H}_2\text{O}$ at an Elevated Temperature,” *Crystal Growth & Design*, June 2017, Vol. 17, pp. 4246-4253, doi: 10.1021/acs.cgd.7b00553 <https://pubs.acs.org/doi/10.1021/acs.cgd.7b00553>
253. Rheinheimer, V., Y. Wu, T. Wu, K. Celik, J. Wang, L. De Lorenzis, P. Wriggers, M. Zhang and P.J.M. Monteiro, “Multi-scale study of high-strength low-thermal-conductivity cement composites containing cenospheres,” *Cement and Concrete Composites*, July 2017, Vol. 80, pp. 91-103, doi: 10.1016/j.cemconcomp.2017.03.002. <https://www.sciencedirect.com/science/article/pii/S095894651730241X?via%3Dihub>
254. Monteiro, P.J.M., S.A. Miller and A. Horvath, “Towards sustainable concrete,” *Nature Materials*, July 2017, Vol. 16, pp. 698-699, doi: 10.1038/nmat4930 <https://www.nature.com/articles/nmat4930>
255. Geng, G., R.J. Myers, M.J.A. Qomi and P.J.M. Monteiro, “Densification of the interlayer spacing governs the nanomechanical properties of calcium-silicate-hydrate,” *Scientific Reports*, September 2017, Vol. 7, doi: 10.1038/s41598-017-11146-8 <https://www.nature.com/articles/s41598-017-11146-8>
256. Tiecher, F., M.E.B. Gomes, D.C.C. Dal Molin, N.P. Hasparyk and P.J.M. Monteiro, “Relationship between Degree of Deformation in Quartz and Silica Dissolution for the Development of Alkali-Silica Reaction in Concrete,” *Materials*, September 2017, Vol. 10, doi: 10.3390/ma10091022 <http://www.mdpi.com/1996-1944/10/9/1022>
257. Myers, R.J., G. Geng, E.D. Rodrigues, P. da Rosa, A.P. Kirchheim and P.J.M. Monteiro, “Solution chemistry of cubic and orthorhombic tricalcium aluminate hydration,” *Cement and Concrete Research*, October 2017, Vol. 100, pp. 176-185, doi: 10.1016/j.cemconres.2017.06.008 <https://www.sciencedirect.com/science/article/pii/S0008884617301345?via%3Dihub>
258. Ortoboy, S., J. Li, G. Geng, R.J. Myers, P.J.M. Monteiro, R. Maboudian and C. Carraro, “Effects of CO_2 and temperature on the structure and chemistry of C-(A-)S-H investigated by Raman spectroscopy,” *RSC Advances*, October 2017, Vol. 7, pp. 48925-48933, doi: 10.1039/c7ra07266j http://pubs.rsc.org/en/content/articlelanding/2017/ra/c7ra07266j?_ga=2.147382078.827652582.1519341889-605032086.1519341889#!divAbstract
259. Yang Zhou, Dongshuai Hou, Hegoi Manzano, Carlos A. Orozco, Guoqing Geng, Paulo J. M. Monteiro, and Jiaping Liu*, Interfacial Connection Mechanisms in Calcium–Silicate–Hydrates/Polymer Nanocomposites: A Molecular Dynamics Study, *ACS Appl. Mater. Interfaces* 2017, 9, 41014-41025. DOI: 10.1021/acsami.7b12795

260. Sum, Y.L., V. Rheinheimer, B.H. Soong and P.J.M. Monteiro, "Effects of Cement Paste Enhanced with Iron-Based Magnetic Particles on an Embedded Small Resonator Antenna," *Scientific Reports*, November 2017, Vol. 7, doi: 10.1038/s41598-017-15289-6 <https://www.nature.com/articles/s41598-017-15289-6>
261. Afroughsabet, V., L. Biolzi and P.J.M. Monteiro, "The effect of steel and polypropylene fibers on the chloride diffusivity and drying shrinkage of high-strength concrete," *Composites Part B*, December 2017, Vol. 139, doi: 10.1016/j.compositesb.2017.11.047 <https://www.sciencedirect.com/science/article/pii/S1359836817302858?via%3Dihub>
262. Miller, S.A., A. Horvath and P.J.M. Monteiro, "Impacts of booming concrete production on water resources worldwide," *Nature Sustainability*, January 2018, Vol. 1, pp. 69-76, doi: 10.1038/s41893-017-0009-5 <https://www.nature.com/articles/s41893-017-0009-5262>.
263. Ana Paula Kirchheim, Erich D. Rodriguez, Rupert J. Myers, Luciano A. Gobbo, Paulo J. M. Monteiro, Denise C. C. Dal Molin, Rui B. de Souza, and Maria Alba Cincotto, Effect of Gypsum on the Early Hydration of Cubic and Na-Doped Orthorhombic Tricalcium Aluminate, *Materials* 2018, 11, 568; doi:10.3390/ma11040568
264. Guoqing Geng, Rupert J. Myers, Young-Sang Yu, David A. Shapiro, Robert Winarski, Pierre E. Levitz, David A.L. Kilcoyne, Paulo J.M. Monteiro, Synchrotron X-ray nanotomographic and spectromicroscopic study of the tricalcium aluminate hydration in the presence of gypsum, *Cement and Concrete Research* 111 (2018) 130–137.
265. G. Geng, J. Lia, Y. Zhou, L. Liu, J. Yand, M. Kunz, Paulo J.M. Monteiro, A high-pressure X-ray diffraction study of the crystalline phases in calcium aluminate cement paste, *CEMENT AND CONCRETE RESEARCH* Volume: 108 Pages: 38-45 2018
266. Guoqing Geng, Roman Nikolayevich Vasin, Jiaqi Li, Mohammad Javad Abdolhosseini Qomi, Jinyuan Yan, Hans-Rudolf Wenk, Paulo J.M. Monteiro, Preferred orientation of calcium aluminosilicate hydrate induced by confined compression, *Cement and Concrete Research*, Volume 113, November 2018, Pages 186-196
267. Yang Zhou, Carlos A. Orozco, Eduardo Duque-Redondo, Hegoi Manzano, Guoqing Geng, Pan Fenga, Paulo J.M. Monteiro, Changwen Miao Modification of Poly(Ethylene Glycol) on the Microstructure and Mechanical Properties of Calcium Silicate Hydrates, *Cement and Concrete Research* 115 (2019) 20–30.
268. Li J., Geng G., Myers R., Yu Y.S., Shapiro D., Carraro C., Maboudian R., Monteiro P.J.M., The chemistry and structure of calcium (alumino) silicate hydrate: A study by XANES, ptychographic imaging, and wide- and small-angle scattering, *Cement and Concrete Research* Volume 115, January 2019, Pages 367-378.
269. Vahid Afroughsabet, Guoqing Geng, Alexander Lin, Luigi Biolzi, Claudia P. Ostertag, Paulo J.M. Monteiro, The influence of expansive cement on the mechanical, physical, and microstructural properties of hybrid-fiber-reinforced concrete, *Cement and Concrete Composites* 96 (2019) 21–32.

270. Jiaqi Li, Guoqing Geng, Wenxin Zhang, Young-Sang Yu, David A. Shapiro, and Paulo J. M. Monteiro, The Hydration of β - and α' -Dicalcium Silicates: An X-ray Spectromicroscopic Study, *ACS Sustainable Chem. Eng.* 2019, 7, 2, 2316-2326.
271. Monteiro, P.J.M., Grigory I. Barenblatt in the concrete world, *Physical Mesomechanics*, Vol. 22, Pages: 1-2, 2019 (Invited Paper by the Editorial Board).
272. Non-destructive mapping of water distribution through white-beam and energy-resolved neutron imaging *Nuclear Inst. and Methods in Physics Research, A* Volume: 927 Pages: 174-183: MAY 21 2019.
273. A. Palomo, P. Monteiro, P. Martauz, V. Bilek, A. Fernandez-Jimenez, Hybrid binders: A journey from the past to a sustainable future (opus caementicium futurum), *Cement and Concrete Research* 124 (2019) 105829.
274. Paulo J.M. Monteiro, Guoqing Geng, Delphine Marchon, Jiaqi Li, Prasanth Alapati, Kimberly E. Kurtis, Mohammad Javad Abdolhosseini Qomi, *Cement and Concrete Research* 124 (2019) 105806.
275. Sébastien Brisard, Marijana Serdar, Paulo J.M. Monteiro, Multiscale X-ray tomography of cementitious materials: A review, *Cement and Concrete Research* 128 (2020) 105824.
276. Daniela Ushizima, Ke Xu and Paulo J.M. Monteiro, *Materials Data Science for Microstructural Characterization of Archaeological Concrete*, MRS Advances 2020, Materials Research Society DOI: 10.1557/adv.2020.131
277. Jiaqi Li, Wenxin Zhang, Chen Li, Paulo J.M. Monteiro, *Journal of Cleaner Production*, Volume 261, 10 July 2020, 121224.
278. Jiaqi Li, Wenxin Zhang, Paulo J.M.Monteiro, Synchrotron X-ray Raman scattering shows the changes of the Ca environment in C-S-H exposed to high pressure, *Cement and Concrete Research*, Volume 132, June 2020, 106066.
279. Qinfei Li Yang Wang,¹ Guoqing Geng, Heng Chen, Pengkun Hou, Xin Cheng, Paulo J. M. Monteiro, Shifeng Huang and Jae Hong Kim, Microstructural Study of Hydration of C3S in the Presence of Calcium Nitrate Using Scanning Transmission X-Ray Microscopy (STXM)," *Journal of Nanomaterials*", vol. 2020, Article ID 8419130, 9 pages, 2020. <https://doi.org/10.1155/2020/8419130>.
280. Chen LiZhengwuJiangRupertJ. MyersQing ChenMengxueWuJiaqi LiPaulo J.M. Monteiro1–34–6789–1112132141515–17 Understanding the sulfate attack of Portland cement–based materials exposed to applied electric fields: Mineralogical alteration and migration behavior of ionic species, *Cement and Concrete Composites*, Volume 111, August 2020, 103630

Non-Refereed Journals

1. D. Selna and P.J.M. Monteiro, Cathedral of Our Lady of The Angels: Combining Architectural and Mass Concrete, *Concrete International*, 2001.
2. H. Amick and Paulo J.M. Monteiro, [Construction of Nanotechnology Facilities](#), *Concrete International*, Vol. 26, 2004.

3. M. Mancio, J. Zhang, P.J.M. Monteiro, Nondestructive Surface Measurement of Corrosion of Reinforcing Steel in Concrete, Canadian Civil Engineer Magazine, May 2004, 12-14.

Refereed Conference Proceedings

1. Monteiro, P.J.M. and P.K. Mehta, "Improvement of the Aggregate-Cement Paste Transition Zone by Grain Refinement of Hydration Products," Proceedings, 8th International Congress on the Chemistry of Cement, Rio de Janeiro, Brazil, 1986, pp. 433-437.
2. Monteiro, P.J.M., "Bond: Paste-Aggregate, Paste-Reinforcement and Paste-Fibers," Communication Report, 8th International Congress on the Chemistry of Cement, Rio de Janeiro, Brazil, 1986, pp. 76-79.
3. Monteiro, P.J.M., "The Interface Between Rock and Oil-Well Cement Paste," Proceedings Pragmatic Strategies for Productivity and Modernization, New Delhi, India, 1987, pp. VI.50-VI.60.
4. Monteiro, P.J.M., J. Oliveira, G. Lopes and H. Alves, "The Effect of Mixing Speed on the Rheology of Oil-Well Cement Paste," Proceedings, Pragmatic Strategies for Productivity and Modernization, New Delhi, India, 1987, pp. IX.27-IX.36.
5. Monteiro, P.J.M. and P.K. Mehta, "Effect of Aggregate, Cement, and Mineral Admixtures on the Microstructure of the Transition Zone," Invited Paper, MRS Society, Boston, 1988, pp. 65-75.
6. Monteiro, P.J.M. and A.I. Rashed, "Low-Temperature Scanning Electron Microscopy (LTSEM) of Frozen Portland Cement Paste," Proceedings of the 14th Western Regional Meeting of Electron Microscopy and Microanalysts, 1989, pp. 57.
7. Monteiro, P.J.M., V.P. Panoskaltis and J. Lubliner, "A Viscoelastic-Plastic-Damage Model for Concrete," Third International Conference on Constitutive Laws for Engineering Materials: Theory and Applications, University of Arizona, Tucson, 1991.
8. Monteiro, P.J.M., H.T. Tang and J.P. Moehle, "Aging Effects on Mechanical Properties of Power Plant Concretes," SMIRTH Conference, Japan, 1991.
9. Monteiro, P.J.M., H.E. Martz, D.J. Schneberk and G.P. Roberson, "Computed Tomography Assessment of Reinforced Concrete," Proceedings, 5th International Symposium on Nondestructive Characterization of Materials, Part 2, Karuizawa, Japan, May 27-30, 1991, Vol. 8-9, pp. 1035-1047.
10. Monteiro, P.J.M., P. Geyskens and A. Der Kiureghian, "Bayesian Model Assessment: Methods and Case Studies," Lecture Notes in Engineering 76, Proceedings, 4th IFIP WG 7.5 Conference, Munich, Germany, 1991, pp. 229-237.
11. Monteiro, P.J.M., J. Lubliner and V. Panoskaltis, "Damage Mechanics of Concrete," Engineering Foundation, Invited Lecture, 1991.
12. Monteiro, P.J.M. and P. Helene, "Can Local Repairs be Durable Solutions for Steel Corrosion in Concrete Structures?" International Conference on Corrosion Protection of Steel in Concrete, Sheffield, UK, 1994.
13. Monteiro, P.J.M. and P. Helene, "Designing Concrete Mixtures for Desired Mechanical Properties and Durability," San Francisco, 1994, ACI SP-144, pp. 519-543.

14. Monteiro, P.J.M. and P. Helene, "Performance Analysis of Lightweight Aggregate," Proceedings of the International RILEM Workshop on Technology Transfer of the New Trends in Concrete, Barcelona, Spain, 1994, pp. 49-63.
15. Monteiro, P.J.M. and M.P. Lutz, "Effect of the Transition Zone on the Bulk Modulus of Concrete," Microstructure of Cement-Based Systems/Bonding and Interfaces in Cementitious Materials, Materials Research Society, 1995, Pittsburgh, PA, Vol. 370, pp. 413.
16. Monteiro, P.J.M. and K. Wang "Ice Propagation in Concrete," The International Conference on Concrete Under Severe Conditions, Sapporo, Japan, 1995, Vol. 1, pp. 203.
17. Monteiro, P.J.M., D. Trejo and G. Thomas, "Dual-Phase Ferritic Martensitic Steel for Concrete Reinforcement," International Offshore and Polar Engineering Conference, Netherlands, 1995.
18. Monteiro, P.J.M., S. Miyazawa and E. Tazawa, "Volume Change of High-Strength Concrete Under Moisture Curing," Proceedings of the 50th Annual Conference of the Japan Society of Civil Engineers, 1995, Vol. 5, pp. 680.
19. Monteiro, P.J.M. and K. Nemati, "Effect of Confinement on the Fracture Behavior of Concrete Under Compression," Fracture Mechanics of Concrete Structures, Freiburg, Germany, 1995.
20. Monteiro, P.J.M. and M.P. Lutz "Effect of the Transition Zone on the Bulk Modulus of Concrete," Materials Research Society Symposium Proceedings, 1995, Vol. 370.
21. Monteiro, P.J.M., J. Lubliner and J. Wang, "A Modified Direct Method for the Calculation of Elastic Moduli of Composite Materials," First International Conference on Composites in Infrastructure, Tucson, Arizona, 1996.
22. Lutz, M.P., P.J.M. Monteiro and R.W. Zimmerman, "Inhomogeneous Interfacial Transition Zone Model for the Elastic Moduli of Concrete," Proceedings of the 4th Materials Engineering Conference, ASCE, Washington, D.C., 1996.
23. Prezzi, M. and P.J.M. Monteiro, "Application of Reliability Analysis to Estimate the Service Life of Lightweight High-Strength Concrete Subjected to Corrosion," International Congress of High-Performance Concrete, Florianopolis, Brazil, 1996.
24. Dal Molin, D., and P.J.M. Monteiro, "Elastic Modulus of High Strength Concrete," International Congress of High-Performance Concrete, Florianopolis, Brazil, 1996.
25. Wang, K. and P.J.M. Monteiro, "Corrosion Products of Reinforced Steel and Their Effects on Concrete Deterioration," Odd E. Gjorv Symposium on Concrete for Marine Structures, Third International Conference on Performance of Concrete Environment, St. Andrews by the Sea, New Brunswick, Canada, 1996.
26. Monteiro, P.J.M., M. Prezzi, K. Kurtis and P.K. Mehta, "The Surface Chemistry of Alkali-Silica Reaction," ACI Conference on Fly-Ash, Silica Fume, Slag; Rome, Italy, 1997.
27. Monteiro, P.J.M., M. Prezzi, K. Kurtis, M. Santos, and W.P. Andrade, "The Importance of the Surface Chemistry in the Alkali-Aggregate Reaction (invited lecture)," Conference on Alkali-Aggregate Reaction in Concrete Structures (in Portuguese), Goiania, Brazil, 1997.
28. Nemati, K. and P.J.M. Monteiro, "Fracture of High-Strength Concrete under Triaxial Loading," Proceedings of the 1st International Engineering Foundation Conference on High Strength Concrete, Kona, Hawaii, July 1997.

29. Nemati, K. and P.J.M. Monteiro, "Observation of Microcracking in Quasi-Brittle Materials," Submitted for the 12th Engineering Mechanics Conference, American Society of Civil Engineers, San Diego, California, May 1998.
30. Nemati, K. and P.J.M. Monteiro, "Micromechanical Behavior of High-Strength Concrete Under Compression," Structural Engineering World Congress (SEWC), San Francisco, California, 1998.
31. Kurtis, K.E., P.J.M. Monteiro, F.A. Rodrigues, J.T. Brown and W. Meyer-Ilse, "The Alkali-Silica Reaction: I) Surface Charge Measurements and II) In - Situ Observations by X-ray Microscopy," Concrete Under Severe Conditions, Tronso, Norway, 1998.
32. Kurtis, K.E., P.J.M. Monteiro, T. Brown and W. Meyer-Ilse, "Expansive Reactions in Concrete Observed by Soft X-ray Transmission Microscopy," Affiliation: University of California Source: Materials Research Society Symposium Proceedings April 13-17, 1998, Vol. 524, pp. 3-9.
33. Rodrigues, F.A., M. Prezzi, P.J.M. Monteiro and G. Sposito, "Use of Electrical Double Layer Theory To Compute The Expansive Pressures Caused By ASR," ASCE Conference, San Diego, CA, 1998.
34. DiPaolo, B.P., P.J.M. Monteiro and R. Gronski, "An Experimental Investigation on the Axial Crush of a Stainless Box Component," Structures Under Shock and Impact VI, April 2000, 397 pp.
35. Kurtis, K.E., P.J.M. Monteiro and W. Meyer-Ilse, "Examination of the Effect of LiCl on ASR Gel Expansion," International Conference on ASR, Quebec, Canada, June 2000.
36. Zhang, J., P.J.M. Monteiro and F. Morrison, "Experimental and Theoretical Study of Reinforced Concrete Using Impedance Measurements," Workshop on the Long Term Durability of Structural Materials, Elsevier Science Ltd, Oxford, UK, 2001.
37. Lamour, L., P.J.M. Monteiro, K.L. Scrivener and H. Fryda, "Microscopic Studies of Early Hydration of Calcium Aluminate Cements, Proceedings of the International Conference on Calcium Aluminate Cements, 2001, pp. 169-180.
38. Lamour, L., P.J.M. Monteiro, K.L. Scrivener and H. Fryda, "Mechanical Properties of Calcium Aluminate Cement Concretes," Proceedings of the International Conference on Calcium Aluminate Cements, 2001, pp. 199-213.
39. Segre, N., A.D. Galves, J.A. Rodrigues, P.J.M. Monteiro and I. Joekes, "Use Of Tyre Rubber Particles in Slag-Modified Cement Mortars," ICCC, January 2003, pp. 1546-1554.
40. Juenger, M.C.G., P.J.M. Monteiro, E.M. Gartner and G.P. Denbeaux, "Using Soft X-Ray Transmission Microscopy to Examine Cement Hydration in the Presence of Retarders," ICCC, January 2003, pp. 249-258.
41. Amick, H. and P.J. Monteiro, "Vibration Control Using Large Pneumatic Isolation Systems with Damped Concrete Inertia Masses," 7th International Conference on Motion and Vibration Control (MoViC 04), Washington University, St. Louis, MO, January 2004, Paper No. 118, pp. 1-10.
42. Bektas, F., L. Turanli and P.J.M. Monteiro, "A Preliminary Study of the Efficiency of Crushed Brick Blended Cement in Reducing ASR," Proceedings of the 12th International Conference on Alkali-Aggregate Reaction in concrete, Beijing, China, January 2004, pp. 479-481.

43. Juenger, M.C.G., P.J.M. Monteiro, V.H.R. Lamour, E.M. Gartner, G.P. Denbeaux and D.T Attwood, "Observation of the Nanostructure of Cement Hydration by Soft X-ray Transmission Microscopy," *Nanotechnology in Construction*, The Royal Society of Chemistry, January 2004, pp.101-104.
44. Amick, H. and P.J.M. Monteiro, "'Toolbox' of Damping Treatments for Concrete Structures," *Proceedings of the Structures Congress and Exposition, Metropolis and Beyond - Proceedings of the 2005 Structures Congress and the 2005 Forensic Engineering Symposium*, 2005, pp. 691-1702.
45. Amick, H. and P.J.M. Monteiro, "Modification of Concrete Damping Properties for Vibration Control in Technology Facilities," *Proceedings of SPIE - The International Society for Optical Engineering 5933*, Art. No. 59330Q, July 2005, pp. 1-12.
46. Zhang, J., J. Harvey, P.J.M. Monteiro and A. Ali, "Effect of Cement Type and Curing Conditions on Flexural Strength of Concrete or Pavement Slabs," *Proceedings of the International Conference on Concrete for Transportation Infrastructure*, 2005, pp. 103-110.
47. Monteiro, P.J.M., A. P. Kirchheim, S. Chae, P. Fischer, A.A. MacDowell, E. Schaible, S.M. Clark and M.A. Marcus, "Cement and Concrete Research Using X-rays at the Advanced Light Source in Berkeley," *Invited Paper, Proceedings of the 3rd International Symposium, "Sustainability in Cement and Concrete," Istanbul, May 2007.*
48. Monteiro, P.J.M., A.P. Kirchheim, S. Chae, P. Fischer, A.A. MacDowell, E. Schaible and H.R. Wenk, "Understanding the Nano and Micro Structure of Concrete to Improve its Durability," *2nd Canadian Conference on Effective Design of Structures, CCEDS II - Sustainability of Civil Engineering Structures, Invited Paper, 2008.*
49. A. Seppänen, K. Karhunen, A. Lehtikoinen, P.J.M. Monteiro and J.P. Kaipio: "Adaptive Meshing Approach to Locating Internal Metals with Electrical Resistance Tomography", In proceedings of 5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), Venice, Italy, June 30 – July 5, 2008.
50. K. Karhunen, A. Seppänen, A. Lehtikoinen, P.J.M. Monteiro and J.P. Kaipio: "Crack identification in concrete with Electrical Resistance Tomography", In proceedings of 5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), Venice, Italy, June 30 – July 5, 2008.
51. A. Seppänen, K. Karhunen, A. Lehtikoinen, J.P. Kaipio and P.J.M. Monteiro: "Electrical resistance tomography imaging of concrete", In proceedings of 2nd international Conference on Concrete Repair, Rehabilitation and Retrofitting, Taylor & Francis Group, London, ISBN 978-0-415-46850-3, pp. 571-577, Cape Town, South Africa, November 24 – 26, 2008.
52. K. Karhunen, A. Seppänen, A. Lehtikoinen, J.P. Kaipio and P.J.M. Monteiro: "Locating reinforcing bars in concrete with Electrical Resistance Tomography", In proceedings of 2nd international Conference on Concrete Repair, Rehabilitation and Retrofitting, Taylor & Francis Group, London, ISBN 978-0-415-46850-3, pp. 563-569, Cape Town, South Africa, November 24 – 26, 2008.
53. P.J.M. Monteiro, *Characterizing the Nano and Micro Structure of Concrete to Improve its Durability*, *Nanotecnologia en el Hormigon y Hormigones Autocompactantes, Jornada Tecnica, Barcelona 2009.*

54. P. J. M. Monteiro, M. Mancio, A. P. Kirchheim, R. Chae, J. Ha, P. Fischer, and T. Tyliczszak, Soft X-ray Microscopy of Green Cements, THE 10TH INTERNATIONAL CONFERENCE ON X-RAY MICROSCOPY, Chicago, 2010.
55. D. Kilcoyne, H. Ade, D. Attwood, A. Hitchcock, P. McKean, G. Mitchell, P. Monteiro, T. Tyliczszak¹ and T. Warwick¹, A new Scanning Transmission X-ray Microscope at the ALS for operation up to 2500eV, 10TH INTERNATIONAL CONFERENCE ON RADIATION INSTRUMENTATION. AIP Conference Proceedings, Volume 1234, pp. 465-468 (2010).
56. Fenn-Chong T., Fabbri A., Dangla, P.J.M. Monteiro, Freezing in Porous Materials: A short tribute to Olivier Coussy novelty, Mechanics and Physics of Porous Solids (MPPS), 2011.
57. Ha, J., Chae, S. and Monteiro, P.J.M., Chou, K.W. and Tyliczszak, T., Characterization of C-S-H using an advanced synchrotron based spectroscopic technique: study on the effects of polymers on C-S-H nanostructures using scanning transmission X-ray microscopy, 13th International Congress on the Chemistry of Cement, Madrid, 2011.
58. A. P. Kirchheim, R. B. de Souza, L. A. Gobbo, D.C. Dal Molin, P.J.M. Monteiro, M. A. Cincotto, Analysis of cubic and orthorhombic C₃A hydration in the presence and absence of gypsum, 13th International Congress on the Chemistry of Cement, Madrid, 2011.
59. Paulo Rolim, Philippe Gleize, Nicole Hasparyk, Paulo Monteiro, Chemical method and variations in the test for siliceous rocks, 14th International Conference on Alkali-Aggregate Reaction, Texas, 2012.
60. Wilson F. Cândido, Nicole P. Hasparyk, Helena Carasek, Paulo Monteiro, Study of lithium treatments in mitigating alkali-aggregate reaction, 14th International Conference on Alkali-Aggregate Reaction, Texas, 2012.
61. R. N. Florindo, J. F. Schneider , N. P. Hasparyk, P.J.M. Monteiro, L. Eiger, Alkali-silicate reaction in quartzite treated by a silane analyzed by nuclear magnetic resonance, 14th International Conference on Alkali-Aggregate Reaction, Texas, 2012.
62. Comi, C., Monteiro, P and Pignatelli, R. (2012). Chemical and mechanical damage in concrete due to swelling of alkali-silica gel. 10th World Congress on Computational Mechanics, Sao Paulo (Brazil).
63. Kemal Celik, Cagla Meral, Mauricio Mancio, P.K. Mehta, P.J.M. Monteiro, A Comparative Study of Self-Consolidating Concretes Incorporating High Volume Natural Pozzolan or High Volume Fly Ash, International Conference on Sustainable Construction Materials and Technologies (SCMT3), Japan, 2013. [Outstanding Paper Award].
64. Yunpeng Wu , Jun-Yan Wang, Paulo J M Monteiro , and Min-Hong Zhang, Ultra-lightweight cement composites with low thermal conductivity for energy efficient buildings, International Conference on Civil and Environmental Engineering, S. Sahinkaya and E. Kalıpcı (Editors) Nevsehir, TURKEY, May 20-23, 2015.
65. Vanessa Rheinheimer, Sejung Rosie Chae, Erich D. Rodríguez, Paulo J. M. Monteiro, Ana Paula Kirchheim, Early hydration of cubic and orthorhombic C₃A in the presence of gypsum: a scanning transmission X-ray microscopy study, The 14th International Congress on the Chemistry of Cement, Beijing, China, 2015.

66. Guoqing Geng , David A. Kilcoyne, Chris.J. Benmore , Paulo J.M. Monteiro, Multi-technology Investigation of the Atomic Structure of Calcium Silicate Hydrates, The 14th International Congress on the Chemistry of Cement, Beijing, China, 2015.
67. Nguyen W., Fernandez-Cruz D., Celik K., Duncan J.F. Monteiro P.J.M., Ostertag C.P., In-situ tensile and corrosion damage characterization of fiber-reinforced cementitious composites using x-ray micro-computed tomography. FRANCOS, 2016.

Reports

1. Effect of Condensed Silica Fume on the Steel-Concrete Bond (with O.E. Gjorv and P.K. Mehta), SESM Report 86/02, U.C. Berkeley (1986).
2. Performance Analysis of Lightweight Mortar (with P. Helene, J. Quinones, D. Trejo, K. Wang), SEMM Report 92/10, U.C. Berkeley (1992).
3. Morphology, Mechanical Behavior and Corrosion Resistance of Dual Phase Fe-2Si-0.1C-0.1Nb Steel (with X. Wang, L. Tang, D. Trejo and G. Thomas), LBL Report No. 32527 (1992).
4. BUMP: Bayesian Updating of Model Parameters (with P. Geyskens and A. D. Kiureghian), SEMM Report 93/06, U.C. Berkeley (1993).
5. Durability and Integrity of Marble (with J. M. Cohen), SEMM Report 93/13, U.C. Berkeley (1993).
6. Mechanisms of Alkali-Aggregate Reaction (with M. Prezzi, J.T.F. Thomas, R. M. Bittencourt), SEMM Report 95/02, U.C. Berkeley (1995).
7. Durability, Tomography, and Repair of Reinforced Concrete (with M. Prezzi, K. Wang, and V. Ghio), SEMM Report 95/11, U.C. Berkeley (1995).
8. High Performance Concrete: Significance of Surface Chemistry to Durability, (with K.E. Kurtis, P.K. Mehta) Proceedings for the U.S.A. and Australia Workshop on Application of High Performance Concrete Including Marine Structures, Sydney, August 1997.
9. Effect of Chemical Additives on Alkali-Silica Reaction Gel Expansion in Concrete as Observed by Transmission X-ray Microscopy, (with K.E. Kurtis, P.J.M. Monteiro, F. Rodrigues, J.T. Brown, and W. Meyer-Ilse) Materials Research Society, 1998 Spring Meeting Proceedings, San Francisco, April 1998.
10. Mechanisms of Damage Caused by Sulfate Attack Examined through Transmission X-ray Microscopy, K.E. Kurtis, P.J.M. Monteiro, J.T. Brown, and W. Meyer-Ilse, ALS Compendium of User Abstracts and Technical Reports 1997, LBL-41658, 1998.
11. Effect of Chemical Additives on the Alkali-Silica Reaction Product Examined by Transmission Soft X-ray Microscopy, (with K.E. Kurtis, J.T. Brown, and W. Meyer-Ilse, ALS Compendium of User Abstracts, 1999.)
12. Analysis of durability of advanced cementitious materials for rigid pavement construction in California (with Kimberly E. Kurtis Pavement Research Center, Institute of Transportation Studies, University of California at Berkeley, 59p, 1999.
13. Accelerated test for measuring sulfate resistance of hydraulic cements for Caltrans LLPRS Program (with Kurtis, Harvey, Shomglin) Pavement Research Center,

Institute of Transportation Studies, [University of California at Berkeley, 2000 viii,
38 p.