

## Brunauer Cements Award

Year (PUB)	Recipients	Paper Title
2016	Sungchul Bae; Rae Taylor; David Shapiro; Peter Denes; John Joseph; Rich Celestre; Stefano Marchesini; Howard Padmore; Tolek Tyliczszak; Tony Warwick; David Kilcoyne; Pierre Levitz; Paulo J. M Monteiro	"Soft X-ray Ptychographic Imaging and Morphological Quantification of Calcium Silicate Hydrates (C-S-H)", <i>Journal of the American Ceramic Society</i> , Vol 98, Issue 12, Dec 15, pages 4090-4095
2015		"An Application of Computer-Aided Molecular Design (CAMD) Using the Signature Molecular Descriptor"
	Hamed M. Kayello; Naresh K. R. Tadisina; Natalia Shlonimskaya; Joseph J. Biernacki; Donald P. Visco Jr.	Part 1. "Identification of Surface Tension Reducing Agents and the Search for Shrinkage Reducing Admixtures", <i>Journal of the American Ceramic Society</i> , 97 (2) 365-377 (2014)
	Natalia Shlonimskaya; Joseph J. Biernacki; Hamed M. Kayello; Donald P. Visco Jr.	Part 2. "Evaluating Newly Identified Surface Tension-Reducing Substances for Potential Use as Shrinkage-Reducing Admixtures", <i>Journal of the American Ceramic Society</i> , 97 (2) 378-385 (2014)
2014	No Award Given	
2013	Jeffrey J. Thomas	"The Instantaneous Apparent Activation Energy of Cement Hydration Measured Using a Novel Calorimetry-Based Method"
2012	Alan J. Benesi Hayden Black Michael W. Grutzeck Pearl Kaplan	"Evidence of Solid Water Bridges Found in Hydrating Tricalcium Silicate Paste"

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	Bernie O'Hare Rachel A. Steinle	
<b>2011</b>	Jeffrey W. Bullard Robert J. Flatt	"New Insights Into the Effect of Calcium Hydroxide Precipitation on the Kinetics of Tricalcium Silicate Hydration"
<b>2010</b>	Rouzbeh Shahsavari Markus Buehler Roland Pellenq Franz-Josef Ulm	"First Principles Study of Elastic Constants and Interlayer Interactions of Complex Hydrated Oxides: Case Study of Tobermorite and Jennite"
<b>2009</b>	Krassimir Garbev Günter Beuchle Peter Stemmermann Leon Black Marc Bornefeld	"Cell Dimensions and Composition of Nanocrystalline Calcium Silicate Hydrate Solid Solutions. Part 2: X-Ray and Thermogravimetry Study"
<b>2008</b>	Jeffrey J. Thomas	"A New Approach to Modeling the Nucleation and Growth Kinetics of Tricalcium Silicate"
<b>2007</b>	John J. Valenza II George W. Scherer	"Mechanism for Salt Scaling"
<b>2006</b>	Not Awarded	
<b>2005</b>	Elena Bonaccorsi Stefano Merlino Anthony Kampf	"The Crystal Structure of Tobermorite 14A (Plombierite), a C-S-H Phase"
<b>2004</b>	Vanessa K. Peterson Brett A. Hunter Abhi Ray	"Tricalcium Silicate T1 and T2 Polymorphic Investigations: Rietveld Refinement at Various Temperatures Using Synchrotron Powder Diffraction"
<b>2003</b>	Valeri S. Harutyunyan Eduward S. Abovyan	"Xray Diffraction Investigations of Microstructure of Calcium Hydroxide Crystallites in the Interfacial Transition Zone of Concrete"

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	Paulo J. M. Monteiro Vahram P. Mkrtchyan Minas K. Balyan Ashoi P. Aivazyan	
<b>2002</b>	Hua Ai J. Francis Young George Scherer	"Thermal Expansion Kinetics: Methods to Measure Permeability of Cementitious Materials: II, Application to Hardened Cement Pastes"
<b>2001</b>	Glen H. Kirby Jennifer A. Lewis	"Rheological Property Evolution in Concentrated Cement - Polyelectrolyte Suspensions"
<b>2000</b>	George W. Scherer	"Measuring Permeability of Rigid Materials by a Beam-Bending Method: I, Theory"
<b>1999</b>	Ping Yu R. James Kirkpatrick Brent Poe Paul McMillan Xiandong Cong	"Structure of Calcium Silicate Hydrate (C-S-H): Near-, Mid-, and Far- Infrared Spectroscopy"
<b>1998</b>	D.P. Bentz	"Three-Dimensional Computer Simulation of Portland Cement Hydration and Microstructure Development"
<b>1997</b>	D. Viehland J.-F. Li I.-J. Yuan Z. Xu	"Mesostructure of Calcium Silicate Hydrate Gels in Portland Cement Paste: Short Range Ordering, Nanocrystallinity, and Local Compositional Order"
<b>1996</b>	Stephen Kwan Judith LaRosa Michael W. Grutzeck	" <sup>29</sup> Si and <sup>27</sup> Al MASNMR Study of Stralingite"
<b>1995</b>	Norifumi Isu Satoshi Teramura	"Mechanical Property Evaluation during Autoclaving Process of Aerated Concrete Using Slag:II, Fracure Toughness & Microstructure"

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	Hideki Ishida Takeshi Mitsuda	
1994	Ian G. Richardson A.R. Brough R. Brydson G. Groves C. Dobson	"Location of Aluminum in Substituted Calcium Silicate Hydrate (C-S-H) Gels as Determined by $^{29}\text{Si}$ and $^{27}\text{Al}$ NMR and EELS"
1993	Hideki Ishida Katsumi Mabushi Kaori Sasaki Takeshi Mitsuda	"Low Temperature Synthesis of $\beta\text{-Ca}_2\text{SiO}_4$ from Hillebrandite"
1992	Ellis Gartner David F. Myers	"Influence of the Ferrite Phase on Cement Strength Development"
1991	Oludele O. Popoola Waltraud M. Kriven J. Francis Young	"Microstructural and Microchemical Characterization of a Calcium Aluminate - Polymer Composite (MDF Cement)"
1990	A. Zurg I. Odler F. Phiemann K. Berghofer	"Autoclave Free Formation of a Hemihydrate Gypsum"
1989	No Award	
1988	Waltraud M. Kriven Chin-Jong Chan J. Francis Young	"Analytical Electron Microscopic Studies of Doped Dicalcium Silicates"

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1987	P. Brown	"The Effect of Particle Size Distribution on the Kinetics of C <sub>3</sub> S Hydration"
1986	Hamlin M. Jennings Steven K. Johnson	"Simulation of Microstructure Development During the Hydration of a Cement Compound"