

### South Texas Section - AIChE Best Applied Paper Award

Year Awarded	Year Award Presented	Recipients ( <i>&amp; all authors</i> )	Best Paper Title	Periodical and Date Published
		(STS member authors are in <b>bold</b> and <u>underlined</u> .)		
2022	2023	<b>Akhilesh Gandhi</b> , Manali S. Zantye, and M.M. Faruque Hasan	<i>"Cryogenic energy storage: Standalone design, rigorous optimization and techno-economic analysis"</i>	<i>Elsevier's Applied Energy</i> , 15 September 2022, Vol. 322, pg. 119413
2021	2022	Zhen-Yu Wu, Mohammadreza Karamad, Xue Yong, Qizheng Huang, David A. Cullen, Peng Zhu, Chuan Xia, Qunfeng Xiao, Mohsen Shakouri, Feng-Yang Chen, Jung Yoon (Timothy) Kim, Yang Xia, Kimberly Heck, Yongfeng Hu, <b>Michael S. Wong</b> , Qilin Li, Ian Gates, Samira Siahrostami, & <b>Haotian Wang</b>	<i>"Electrochemical ammonia synthesis via nitrate reduction on Fe single atom catalyst"</i>	<i>NATURE COMMUNICATIONS</i> , Vol. 12, May 17, 2021, pp. 2870 (1/10)
2020	2021	<b>Jordan L. Shivers</b> , Jingchen Feng, Anne S. G. van Oosten, Herbert Levine, Paul A. Janmey, & <b>Fred C. MacKintosh</b>	<i>"Compression stiffening of fibrous networks with stiff inclusions"</i>	<i>Proceedings of the National Academy of Sciences</i> , Vol. 117, 17 August 2020, pp. 21037-21044
2019	2020	Chuan Xia, Yang Xia, Peng Zhu, Lei Fan, and <b>Haotian Wang</b>	<i>"Direct electrosynthesis of pure aqueous H<sub>2</sub>O<sub>2</sub> solutions up to 20% by weight using a solid electrolyte"</i>	<i>Science</i> Vol 11, October 2019, No. 366, pp. 226–231
2018	2019	Jun Kuang, <b>Mohammad Tavakkoli</b> , Josiah Yarbrough, Jianxin Wang, Shekhar Jain, Sunil Ashtekar, Dalia S. Abdallah, Sameer Punnapala, and <b>Francisco M. Vargas</b>	<i>"Investigation of Asphaltene Deposition at High Temperature and under Dynamic Conditions"</i>	<i>Energy Fuels</i> 2018, Vol. 32, pp. 12405–12415
2017	2018	Yu-Jiun Lin, Peng He, Mohammad Tavakkoli, Nevin Thunduvila Mathew, Yap Yit Fatt, John C. Chai, Afshin Goharzadeh, <b>Francisco M. Vargas</b> , and <b>Sibani Lisa Biswal</b>	<i>"Characterizing Asphaltene Deposition in the Presence of Chemical Dispersants in Porous Media Micromodels"</i>	<i>Energy &amp; Fuels</i> 2017, 31, pp. 11660-11668
2016	2017	<b>Mohammad Tavakkoli</b> , Andrew Chen, and <b>Francisco M. Vargas</b>	<i>"Rethinking the modeling approach for asphaltene precipitation using the PC-SAFT Equation of State"</i>	<i>Fluid Phase Equilibria</i> , 25 May, 2016, Vol. 416, pp. 120–129
2015	2016	Wael A. Fouad, Matt Yarrison, Kyoo Y. Song, <b>Kenneth R. Cox</b> , and <b>Walter G. Chapman</b>	<i>"High Pressure Measurements and Molecular Modeling of the Water Content of Acid Gas Containing Mixtures"</i>	<i>AIChE Journal</i> , September 2015, Vol. 61, No. 9, pp. 3038 - 3052
2014	2015	<b>Francisco M. Vargas</b>	<i>"Simple Method To Calculate the Temperature Dependence of the Gibbs Energy and Chemical Equilibrium Constants"</i>	<i>Journal Chemical Education</i> (ACS), 2014, 91 (3), pp. 396-401
2013	2014	Natnael Behabtu, Colin C. Young, Dmitri E. Tsentelovich, Olga Kleinerman, Xuan Wang, Anson W. K. Ma, E. Amram Bengio, Ron F. ter Waarbeek, Jorrit J. de Jong, Ron E. Hoogerwerf, Steven B. Fairchild, John B. Ferguson, Benji Maruyama, Junichiro Kono, Yeshayahu Talmon, Yachin Cohen, Marcin J. Otto, and <b>Matteo Pasquali</b>	<i>"Strong, Light, Multifunctional Fibers of Carbon Nanotubes with Ultrahigh Conductivity"</i>	<i>SCIENCE</i> , VOL 339, 11 January 2013
2012	2013	Madhuri Thakur, Steven L. Sinsabaugh, Mark J. Isaacson, Michael S. Wong, and <b>Sibani Lisa Biswal</b>	<i>"Inexpensive Method for Producing Macroporous Silicon Particulates (MPSPs) with Pyrolyzed Polyacrylonitrile for Lithium Ion Batteries"</i>	<i>Nature/Scientific Reports</i> , 2 : 795
2011	2012	Anjushri S. Kurup, Francisco M. Vargas, Jianxin Wang, Jill Buckley, Jefferson L. Creek, Hariprasad, J. Subramani, & <b>Walter G. Chapman</b>	<i>"Development and Application of an Asphaltene Deposition Tool (ADEPT) for Well Bores"</i>	<i>ACS Energy Fuels 2011</i> , 25, 4506–4516
2010	2011	Hitesh G. Bagaria, Gautam C. Kini, and <b>Michael S. Wong</b>	<i>"Electrolyte Solutions Improve Nanoparticle Transfer from Oil to Water"</i>	<i>J. Phys. Chem. C</i> , Vol. 2010, 114, pp. 19901–19907
2009	2010	Virginia A. Davis A. Nicholas G. Parra-Vasquez, Micah J. Green, Pradeep K. Rai, Natnael Behabtu, Valentin Prieto, Richard D. Booker, Judith Schmidt, Ellina Kesselman, Wei Zhou, Hua Fan, W. Wade Adams, Robert H. Hauge, John E. Fischer, Yachin Cohen, Yeshayahu Talmon, Richard E. Smalley (Nobel Laureate), and <b>Matteo Pasquali</b> (Rice Univ.)	<i>"True solutions of single-walled carbon nanotubes for assembly into macroscopic materials"</i>	<i>NATURE NANOTECHNOLOGY</i> , Vol. 4, December 2009, pp 830 - 834 [www.nature.com/naturenanotechnology]
2008	2009	<b>Cary L. Pint</b> , Sean T. Pheasant, <b>Matteo Pasquali</b> , Kent E. Coulter, <b>Howard K. Schmidt</b> , and Robert H. Hauge (Rice Univ.)	<i>"Synthesis of High Aspect-Ratio Carbon Nanotube 'Flying Carpets' from Nanostructured Flake Substrates"</i>	<i>Nano Lett.</i> , 2008, 8 (7), 1879-1883.
2007	2008	Martyn V. Twigg and <b>James T. Richardson</b> (Univ. of Houston)	<i>"Fundamentals and Application of Structured Ceramic Foam Catalyst"</i>	<i>Industrial &amp; Engineering Chemistry Research</i> , 2007, 46, 4166-4177
2006	2007	James Lattner and <b>Michael Harold</b> (Univ. of Houston)	<i>"Autothermal Reforming of Methanol: Experiments and Modeling"</i>	<i>Catalysis Today</i> , 120, p78-89, 2006
2005	2006	<b>Michael O. Nutt</b> , Joseph B. Hughes, and <b>Michael S. Wong</b> (Rice Univ.)	<i>"Designing Pd-on-Au Bimetallic Nanoparticle Catalysts for Trichloroethene Hydrodechlorination"</i>	<i>Environmental Science and Technology</i> , vol. 39, pp 1346-1353.

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Year Awarded	Year Award Presented	Recipients (& all authors)	Best Paper Title	Periodical and Date Published
		(STS member authors are in <b>bold</b> and <u>underlined</u> .)		
2004	2005	K. Y. Song, M. Yarrison, & <b>W. Chapman</b> (Rice Univ.)	"Experimental low temperature water content in gaseous methane, liquid ethane and liquid propane in equilibrium with hydrate at cryogenic conditions"	<i>Fluid Phase Equilibria</i> 224 (2004) 271-277.
2003	2004	Yong Ok Jeong & <b>Dan Luss</b> (Univ. of Houston)	"Pollutant Destruction in a Reverse Flow Chromatographic Reactor"	<i>Chemical Engineering Science</i> 58 (2003), pages 095-1102
2002	2003	<b>Dan Luss</b> , Rohit Garg, and Abdul Garayhi (Univ. of Houston)	"Influence of Product Absorption on the Operation of a Reverse Flow Reactor"	@NA
2001	2002	<b>Dr. Ron Darby</b> , P.E., Ph.D. (Texas A&M Univ)	"Take the Mystery Out of Non-Newtonian Fluids"	<i>Chemical Engineering</i> , March, 2001
2000	2001	<i>No Award Given</i>	<i>No Award Given</i>	<i>No Award Given</i>
1999	2000	F. Craig Moats, Timothy E. McMinn, and <b>James T. Richardson</b> (Univ. of Houston)	"Radial Reactor for Trichloroethylene Steam Reforming"	<i>AIChE Journal</i> , Vol. 45, No. 11, Nov 1999
1998	1999	<b>D. Luss</b> and J. Kinast (Univ. of Houston)	"Continuously stirred decanting reactor: Operability and stability considerations"	<i>AIChE Journal</i> , 44, (1998), 372-387
1997	1998	<b>Dr. Jerald Linsley</b> , P.E., Ph.D. (Industry)	"New, simpler equations calculate pressure-compensate temperatures"	<i>Oil &amp; Gas Journal</i> , 24 - March, 1997
1996	1997	<b>Dragomir B. Bukur</b> (Principal Author), James G. Daly, & Snehal A. Patel	@NA	@NA
1995	1996			
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1993	1994	<i>No Award Given</i>	<i>No Award Given</i>	<i>No Award Given</i>
1992	1993	<b>Dr. Dan Luss, PhD (UH)</b>		
1991	1992	<b>Dr. Ron Darby</b> , P.E., Ph.D. (Texas A&M Univ)		
1990	1991	<b>Evan G. Bauman</b> & Arvind Varma	"Parametric Sensitivity and Runaway in Catalytic Reactors: Experiments and Theory I"	<i>Chemical Engineering Science</i> Vol 45, No 8, pp 2133-2139, 1990
1989	1990	T. L. Evans & <b>R. E. White</b>	"Estimation of Electrode Kinetic Parameters of the Lithium/Thionyl Chloride Cell Using"	<i>Journal of the Electrochemical Society</i> , Vol. 136, No. 10, pp. 2798-2805, 1989
1988	1989	<b>J. T. Richardson, S.A. Paripatvadar</b> , & J. C. Shen (Univ. of Houston)	"Dynamics of a Sodium Heat Pipe Reforming Reactor"	<i>AIChE Journal</i> , Vol. 34, No. 5, pp. 743-752, May 1988
1987	1988	<b>P. A. Nelson</b> (Industry)	@NA	
1986	1987	<i>No Award Given</i>		
1985	1986	<b>S. E. Gallum</b>	"The Measurement of Aerated Slurry Levels and Densities in High Pressure, Stirred, F"	<i>ISA Transactions</i> , 24 (4), 55 (1985)
1984	1985	<b>R. Darby</b> , & H. F. D. Ciang (Texas A&M Univ)	@NA	
1983	1984	<b>James R. Fair</b> & A. Klip (Univ. of Texas)	@NA	
1982	1983			
1981	1982	R. Semiat & <b>A. E. Dukler</b> (Univ. of Houston)	@NA	
1980	1981			
1979	1980	<b>C. D. Holland</b> (TAMU) & <b>N. S. Al-Haj-Ali</b> (Pullman Kellogg)		
1978	1979			
1977	1978	<b>Dr. Ron Darby</b> , P.E., Ph.D. (Texas A&M Univ)	@NA	
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1970	1971	<b>Dr. Dan Luss</b> , PhD (UH)		
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1965	1966	??? David E. Rosenberg & David Hellums	"Flow development and heat transfer in variable-viscosity fluids"	<i>Indust. Engng Chem. Fund.</i> 4, 417-422 (1965)
1964	1965	<b>M. A. Van Winkle</b> & James Helpinstill (Univ. of Texas)		
1963	1964			
1962	1963	<b>Ray N. Finch</b> and <b>M. Van Winkle</b> (Univ. of Texas)	"-Prediction of Binary and Ternary Vapor Liquid Equilibrium Data Using Modified Van	<i>AIChE Journal</i> , 8: 455-460
1961	1962			
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