

H. Michael Cheung, Ph.D., P.E.

Publications: [Refereed Publications](#), [Patents](#), [Other Publications](#)

Refereed Publications: (35 published)

35. Romey, N.; Schwartz, R.M.; Behrend, D.; Miao, P.; Cheung, H.M.; Beitle, R. "Circumventing Graphical User Interfaces in Chemical Engineering Plant Design" *Advances in Engineering Education* 2007, 1 (1); inaugural issue of ASEE's online journal; URL <http://advances.asee.org/vol01/issue01/index.cfm>
34. Wang, R.; Cheung, H.M. "Ultrasound Assisted Polymerization of MMA and Styrene in near critical CO₂" *J Supercritical Fluids* 2005, 33, 3, 269-274.
33. Wang, R.; Cheung, H.M. "A New PDMS Macromonomer Stabilizer for Dispersion Polymerization of Styrene in Supercritical Carbon Dioxide" *J. Applied Polymer Science* 2004, 93, 2, 545-549.
32. Challa, V.; Kuta, K.; Lopina, S.; Cheung, H.M.; von Meerwall, E. "Microporosity of Bicontinuous Nanoporous Polymeric Materials, Characterized with Restricted Diffusion" *Langmuir* 2003, 19, 4154-4161.
31. Gaddam, K.; Cheung, H.M. "Effects of Pressure, Temperature, and pH on the Sonochemical Destruction of 1,1,1-trichloroethane in Dilute Aqueous Solution" *Ultrasonics Sonochemistry* 2001, 8, 103-109.
30. Gaddam, K.; Cheung, H.M. "Ultrasound Assisted Emulsion Polymerization of Methyl Methacrylate and Styrene" *Journal of Applied Polymer Science* 2000, 76, 1, 101-104.
29. Davis, E.W.; Mukkamala, R.; Cheung, H.M. "Effects of precursor composition on pore morphology for thermally polymerized acrylic acid, methyl methacrylate based microemulsions" *Langmuir* 1998, 14(4), 762-767.
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26. Mukkamala, R.; Cheung, H.M. "Acid and Base Effects on the Morphology of Composites Formed from Microemulsion Polymerization and Sol-gel Processing" *Journal of Materials Science* 1997, 32, 4687-4692.
25. Mukkamala, R.; Cheung, H.M. "Polymer Composites Obtained by Polymerization of Microemulsions Formed with Inorganic and Organic Monomers" *Langmuir* 1997, 13, 617-622.
24. Palani Raj, W.R.; Cheung, H.M. "Porous Polymeric Membranes Synthesized from Microemulsions", chapter in *The Polymeric Materials Encyclopedia: Synthesis, Properties and Applications*, v.6 p.4082-4088; J.C. Salamone, Ed.; CRC Press; Boca Raton FL; 1996. Also in CD by same title (ISBN 0849326516).
23. Palani Raj, W.R.; Sasthav, M.; Cheung, H.M. "Polymerization of Single Phase Microemulsions: Dependence of Polymer Morphology on Microemulsion Structure" *Polymer* 1995, 36, 13, 2637-2646.
22. Sasthav, M.; Palani Raj, W.R.; Cheung, H.M. "Microstructured Polymers via Photopolymerization of Non-aqueous Organized Solutions", *Polymer* 1994, 35, 19, 4072-4078.

21. Cheung,H.M.; Kurup,S. "Sonochemical Destruction of CFC 11 and CFC 113 in Dilute Aqueous Solution", [*Environmental Science & Technology*, 1994, 28, 9, 1619-1622.](#)
20. Bhatnagar,A.;Cheung,H.M. "Sonochemical Destruction of Chlorinated C1 and C2 Volatile Organic Compounds in Dilute Aqueous Solution", [*Environmental Science & Technology* 1994, 28, 8, 1481-1486.](#)
19. Clouse,D.J.;Cheung,H.M. "Effects of Aerosol OT on the Phase Separation Temperatures of Methanol/Hydrocarbon/Water Blends" *Fuel Science and Technology International* 1994, 12, 9, 1271-1279..
18. Ansari,R.R.;Dhadwal,H.S.;Cheung,H.M.;Meyer,W.V. "Microemulsion Characterization Using a Fiber Optic Probe" *Journal of Applied Optics* 1993, 32, 21, 3822-3827.
17. Palani Raj,W.R.;Sasthav,M.;Cheung,H.M. "Synthesis of Porous Polymeric Membranes by Polymerization of Microemulsions" *Polymer* 1993,34, 15, 3305-3311.
16. Palani Raj,W.R.;Sasthav,M.;Cheung,H.M. "Formation of Polymeric Foams from Aqueous Foams Stabilized using a Polymerizable Surfactant" *Journal of Applied Polymer Science* 1993, 49, 1453-1470.
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14. Cheung,H.M. "Sonochemical Destruction of Aqueous Contaminants" *Chapter One - The AIChE Magazine for Students*, Winter 1992-93 Issue, Vol. 7, Number 1, p.20-22.
13. Elliott,Jr.,J.R.;Cheung,H.M. "Light Scattering Study of Polymer Network Formation in a Supercritical Diluent" *ACS Symposium Series* #514, p.271-280, [*Supercritical Fluid Engineering Science*](#), E. Kiran & J. Brennecke, Ed., American Chemical Society, 1992.
12. Palani Raj,W.R.;Sasthav,M.;Cheung,H.M. "Polymerization of Microstructured Aqueous Systems formed using Methyl Methacrylate and Potassium Undecenoate" [*Langmuir* 1992, 8, 8, 1931-1936.](#)
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8. Bhatnager,A.;Jansen,G.;Cheung,H.M. "Sonochemical Destruction of Chlorinated Hydrocarbons in Dilute Aqueous Solution" [*Environmental Science and Technology* 1991, 25, 8, 1510-1512.](#)
7. Sasthav,M.;Cheung,H.M. "Characterization and Polymerization of Middle Phase Microemulsions in Styrene/Water Systems" [*Langmuir* 1991, 7, 7, 1378-1382.](#)
6. Nitirahardjo,S.;Cheung,H.M. "Effect of Surfactants and Cosurfactants on the Phase Separation Temperature and Volatility of Methanol/Hydrocarbon/Water Blends" [*Energy and Fuels* 1990, 4, 3, 303-307.](#)

5. Patel,R.;Cheung,H.M. "Effects of Heptanoic and Oleic Acid on the Phase Separation Temperatures of Methanol/hydrocarbon/water Mixtures" [Energy and Fuels 1989, 3, 1, 76-79.](#)
4. Shere,A.;Cheung,H.M. "Effect of Preparation Parameters on Leakage in Liquid Surfactant Membrane Systems" *Separation Science and Technology* 1988, 23, 6 & 7, 687-701.
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2. Cheung,H.M.;Qutubuddin,S.;Mann,Jr.,J.A.;Edwards,R.V. "Light Scattering Study of Oil-in-Water Microemulsions: Corrections for Interactions" [Langmuir 1987, 3, 5, 744-752.](#)
1. Mann,Jr.,J.A.;Edwards,R.V.;Gall,T.;Cheung,H.M.;Coffield,F.;Havens,C.;Wagner,P. "APL Level Languages in Analysis: A Host-Microcomputer-Instrument Hierarchy in Light Scattering Spectroscopy" *ACS Symposium Series #57*, 1977 (ed. Peter Lykos).

Patents: 5 issued

5. Meyer,W.V.; Cannell,D.; Tin,P.; Cheung,H.M.; Mann,J.A.,Jr.; Taylor,T.; Zhu,J.; Smart,A.E. "Cross-Correlation Method and Apparatus for Suppressing the Effects of Multiple Scattering"; [U.S. Patent# 5,956,139](#), issued 9/21/99.
4. Cheung,H.M. "Combined Optical Train for Laser Spectroscopy"; [U.S. Patent# 5,298,969](#) (same title as #3, but different technology was patented, original application was divided by the patent office), issued 3/29/94.
3. Cheung,H.M. "Combined Optical Train for Laser Spectroscopy" [U.S. Patent# 5,298,968](#), issued 3/29/94.
2. Greene,H.L.;Cheung,H.M.;Danals,R.S.;Vimiwala,S.V. "Catalyst for Destruction of Hazardous Chlorinated Wastes and Process for Preparing the Catalyst" [U.S. Patent #5,075,273](#) issued 12/24/91 .
1. Cheung,H.M. "Combined High Spatial Resolution and High K-Vector Selection Optical Train for Laser Spectroscopy", [U.S. Patent #5,028,135](#) issued 7/2/91.

Articles in Edited Books, Proceedings, Book Reviews, other Publications:

14. H. K. Qammar, H. M. Cheung, E. A. Evans, S. Prettyman Spickard, F. S. Broadway, and R. D. Ramsier, "Impact of Vertically Integrated Team Design Projects on First Year Engineering Students", [Paper 2004-1952](#), Proceedings of 2004 ASEE Annual Conference (2004). Nominated for best paper.
13. S. Prettyman Spickard, H. K. Qammar, F. S. Broadway, H. M. Cheung, and E. A. Evans, "The Impact of Vertically Integrated Design Teams on the Chemical Engineering Program", [Paper 2004-1398](#), Proceedings of 34th ASEE/IEEE Frontiers in Education Conference (2004).
12. Broadway,F.S.; Evans,E.A.; Cheung,H.M.; Qammar,H.K.; Ramsier,R.D. "Reflective Journals: An Assessment of a Vertically Integrated Design Team Project" [Paper 2003-2210](#), Proceedings of the 2003 American Society for Engineering Education Annual Conference & Exposition.
11. Ramsier,R.D.; Broadway,F.S.; Cheung,H.M.; Evans,E.A.; Qammar,H.K. "University Physics: A Hybrid Approach" [Paper 2003-1970](#), Proceedings of the 2003 American Society for Engineering Education Annual Conference & Exposition.

10. Qammar,H.K.; Cheung,H.M.; Evans,E.A.; Broadway,F.S.; Ramsier,R.D. " Focusing on Teamwork Versus Technical Skills in the Evaluation of an Integrated Design Project" [Paper 2003-1433](#), Proceedings of the 2003 American Society for Engineering Education Annual Conference & Exposition.
9. Taylor,T.W.; Meyer,W.V.; Tin,P.; Mann,J.A.; Cheung,H.M.; Rogers,R.B.; Lading,L. "A New Surface Light Scattering Instrument with Autotracking Optics" *Photon Correlation & Scattering*, Volume 14, 1996 OSA Technical Digest Series (Optical Society of America, Washington, DC), pp. 114-116.
8. Meyer,W.V.; Lock,J.; Cannell,D.S.; Taylor,T.W.; Tin,P.; Smart,A.E.; Zhu,J.; Cheung,H.M.; Mann,J.A. "A Single Wavelength Cross-Correlation Technique Which Suppresses Multiple Scattering" *Photon Correlation & Scattering*, Volume 14, 1996 OSA Technical Digest Series (Optical Society of America, Washington, DC), pp. 104-107.
7. Cheung,H.M.; Meyer,W.V.; Taylor,T.; Tin,P.; Barmatz,M.; Biswas,A.; Mann,J.A. "Hardware and Software Modification of a Commercial Laser Vibrometer for Investigation of High Amplitude Surface Fluctuations with Optical Tracking" *Photon Correlation & Scattering*, Volume 14, 1996 OSA Technical Digest Series (Optical Society of America, Washington, DC), pp. 97-99.
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4. Cheung, H.M. Review of the book Chemistry with Ultrasound, Vol. 28, Critical Reports on Applied Chemistry, Society of Chemical Industry written by T.J. Mason, published by Elsevier Applied Science, New York, 1990, ISBN # 1-85166-422-X, review published in *Environmental Science and Technology* 1992.
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