Ophelia K. C. Tsui

Personal Data

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Research Interests

My current research interest comprises various fields of soft condensed matter physics, including dynamics of polymers under confinement in nanometer films, dewetting stability of nanometer polymer films, as well as the design and fabrication of polymer nano-composite membranes for ion filtration. In my studies, I use atomic force microscopy extensively for dynamic and morphological characterization. As a result, my research also frequently touches upon nano-mechanics and nanotribology.

Professional Services and Membership

- Referee for *Nature Materials, Physical Review Letters, Physical Review E, Macromolecules, Langmuir, Journal of Chemical Physics, Nanotechnology, Journal de Physique IV, Journal of Polymer Science Part B: Polymer Physics, Polymer, European Physical Journal E, Solid State Communications*, and *Journal of Micromechanics and Microengineering, etc.*
- Co-editor of *Polymer Thin Films*, a volume in the series, *Soft Condensed Matter Physics* organized by David Andelman and Günter Reiter, to be published by World Scientific.
- Member of the American Physical Society
- Member of the Hong Kong Women Professionals and Entrepreneurs Association
- Consultant of Ella Cheong (HK) Ltd.

Teaching

1. Elementary Physics I&II (Lectures and Labs for premed. students)
3. Experimental Physics (Laboratory for juniors)
2. Microcharacterization (Lectures for postgraduates)
4. Solid State Physics (Lectures for postgraduates)

Refereed Journal Publications

1. "Wettability of End-Grafted Polymer Brush by Chemically Identical Polymer Films", X. Zhang, F. K. Lee, O. K. C. Tsui, Macromolecules (accepted).
2. “Examination of Non-Liquidlike Behaviors in Molten Polymer Films”, Z. H. Yang, Y. J. Wang, L. Todorova and O. K. C. Tsui (accepted).
3. “Crossing Microfluidic Streamlines to Lyse, Label and Wash Cells", K. J. Morton, K. Loutherback, D. W. Inglis, O. K. Tsui, J. C. Sturn, S. Y. Chou, R. H. Austin, Lab on a Chip, **8**, 1448-1453 (2008).
4. "Hydrodynamic Matamaterials: Nanofabricated Arrays to Steer, Refract and Focus Streams of Biomaterials", K. J. Morton, K. Loutherback, D. Inglis, O. K. Tsui, J. C. Sturm, S. Y. Chou, R. H. Austin, PNAS, **105**, 7434-7438 (2008).
5. “Equilibrium Pathway of Spin-coatd Polymer Films”, O. K. C. Tsui, Y. J. Wang, F. K. Lee, C. –H. Lam, Z. H. Yang, *Macromolecules* **41**, 1465-1468 (2008).

6. "Effect of Pattern Topology on the Self-cleaning Properties of Textured Surfaces", Xueyun Zhang, B. Kong, O. K. C. Tsui, X. Yang, Y. Mi, C. M. Chan, and B. Xu, *J. Chem. Phys.* **127**, 014703 (2007).
7. "Stability of Polymer Films as a 2D System", Y. J. Wang, C. H. Lam, X. Zhang, O. K. C. Tsui, *Eur. Phys. J. Special Topics*, **141**, 181-187 (2007).
8. "Mean-field Description of Spinodal Growth of Surface Waves on Rupturing Films", Y. J. Wang, O. K. C. Tsui, *J. Non-Cryst. Solids*, **352**, 4977-4982 (2006).
9. "Liquid Crystal Pretilt Angle Control Using Nano-textured Surfaces", F. S. Y. Yeung, F. C. Xie, J. Wan, F. K. Lee, O. K. C. Tsui, P. Sheng, H. S. Kwok, *J. Appl. Phys*. **99**, 124506 (2006).
10. "Substrate Patterning for Liquid Crystal Alignment by Optical Interference", Xuemin Lu, Fuk Kay Lee, Ping Sheng, H. S. Kwok, V. Chigrinov, O. K. C. Tsui, *Appl. Phys. Lett*. **88**, 243508 (2006).
11. "Adhesion of free-standing Newton black film onto a solid substrate", J. -J. Benattar, M. Nedyalkov, F. K. Lee, O. K. C. Tsui, *Angew Chem*. **45**, 1-5 (2006).
12. "Unconventional Spinodal Surface Fluctuations on Polymer Films", Y. J. Wang, O. K. C. Tsui, *Langmuir* **22**, 1959-1963 (2006).
13. "Variable Liquid Crystal Pretilt Angles by Nano-structured Surfaces", F. S. Y. Yeung, J. Y. Ho, Y. W. Li, F. C. Xie, O. K. C. Tsui, P. Sheng, H. S. Kwok, *Appl. Phys. Lett.* **88**, 051910-1-3 (2006).
14. "Effect of Dispersion Forces in the Instability of Polymer Films", Heping Zhao, Ophelia K. C. Tsui, and Zheng-You Liu, *Chinese Phys*. **15**, 172-176 (2006).
15. "Polarisation-independent liquid crystal phase grating on azo-dye film through intensity holography", Xuemin Lu, Qinghua Lu, Fuk Kay Lee, Ophelia Tsui, *Appl. Phys Lett*. **89**, 203507 (2006).
16. "Liquid Crystal Pretilt Control by Inhomogeneous Surfaces", Jones T. K. Wan, Ophelia K. C. Tsui, Hoi-Sing Kwok, Ping Sheng, *Phys. Rev. E* **72**, 021711-1-021711-4 (2005).
17. "Microscopic Surface Patterning by Rubbing Induced Dewetting", X. Zhang, F. C. Xie, O. K. C. Tsui, *Polymer* **46**, 8416-8421 (2005).
18. "Dewetting induced by complete versus non-retarded dispersion forces", Heping Zhao, Yong Jian Wang and Ophelia K. C. Tsui., *Langmuir* **21**, 5817-5824 (2005).
19. "Dispersion forces effects in the instability of polymer films", Heping Zhao, Ophelia K. C. Tsui, Zhengyou Liu, *Solid State Comm.* **134**, 455-459 (2005).
20. "Continuous liquid crystal pretilt control through textured substrates", Fuk Kay Lee, Baoshe Zhang, Ping Sheng, Hoi Sing Kwok, Ophelia K. C. Tsui., *Appl. Phys. Lett.* **85**(23), 5556-8 (2004).
21. "Erratum: 'Continuous liquid crystal pretilt control through textured substrates'[Appl. Phys. Lett. 85, 5556 (2004)]", Fuk Kay Lee, Baoshe Zhang, Ping Sheng, Hoi Sing Kwok, Ophelia K. C. Tsui., *Appl. Phys. Lett.* 86, 149903 (2005).
22. "Extraordinary Hall Effect in $(Ni_{80}Fe_{20})_x(SiO_2)_{1-x}$Thin Films", Hui Liu, Fuk Kay Lee, Rong Kun Zheng, X. X. Zhang, Ophelia K. C. Tsui, *Phys. Rev. B.* **70**, 224431 (2004).
23. "First-Order Liquid Crystal Orientation Transition on Inhomogeneous Substrates", Ophelia K. C. Tsui, Fuk Kay Lee, Baoshe Zhang, Ping Sheng, *Phys. Rev. E* **69**(2), 021704-1–021704-7 (2004).
24. "Some Views about the Controversial Dewetting Morphology of Polystyrene Films", Ophelia K. C. Tsui, Y. J. Wang, Heping Zhao, Binyang Du, *Eur. Phys. J. E: Focus Point on Unstable Thin Films* **12**, 417–425 (2003). (invited article)

25. "Comment on 'Tentative Interpretation of the Dewetting Morphologies Presented by Tsui et. al.' by Thiele", Ophelia K. C. Tsui *Eur. Phys. J. E: Focus Point on Unstable Thin Films* **12**, 429–430 (2003).
26. "Liquid Crystal Orientation Transition on Microtextured Substrates", Baoshe Zhang, Fuk Kay Lee, Ophelia K.C. Tsui, Ping Sheng, *Phys. Rev. Lett*., **91**(21), 215501-1–215501-4 (2003).
27. "Study on the Origin of Inverted Phase in Drying Solution-Cast Block Copolymer Films", Haiying Huang, Fajun Zhang, Zhijun Hu, Binyang Du, Tianbai He, Fuk Kay Lee, Yongjian Wang, Ophelia K. C. Tsui, *Macromolecules*, **36**(11), 4084-4092 (2003).
28. "Effect of C60 Molecular Rotation on Nanotribology", Qi Liang, O.K.C. Tsui, Yabo Xu, Hongnian Li, Xudong Xiao, *Phys. Rev. Lett.*, **90**(14), 146102-1 (2003).
29. "Fabrication of Mesoscopic Devices Using Atomic Force Microscopic Electric Field Induced Oxidation", F. K. Lee, G. H. Wen, X. X. Zhang, O.K.C. Tsui, *J. Vac. Sci. Tech. B*, **21**(1), 162-167 (2003). (This paper has been selected by the *Virtual Journal of Nanoscale Science & Technology* Vol. 7(3), 2003.)
30. "Rupturing of Polymer Films with Rubbing Induced Surface Defects", B. Du, F.C. Xie, Y.J. Wang, O.K.C. Tsui, *Chin. J. Polym. Sci.*, **21**(2), 123-127 (2003).
31. "Nanometer Scale Mechanical Study on Well Defined Nanostructured Chain Aggregation of Polyethylene", Binyang Du, Jieping Liu, Jian Zhang, Decai Yang, Tianbai He and Ophelia K. C. Tsui, *Macromol. Symp*. **195**, 141-146 (2003).
32. "Dewetting of Polymer Films with Built-in Topographical Defects", B. Du, F. Xie, Y. Wang, Z. Yang, O.K.C. Tsui, *Langmuir*, **18**(22), 8510-8517 (2002).
33. "Dynamic Study of Polymer Films by Friction Force Microscopy With Continuously Varying Load", Xiaoping Wang, O.K.C. Tsui, Xudong Xiao, *Langmuir*, **18**(18), 7066-7072 (2002).
34. "Solventless Polymerization at the Glass/Solid Interface to Form Polymeric Thin Films", Degang Fu, Lu-Tao Weng, Binyang Du, Ophelia K.C. Tsui, Bing Xu, *Adv. Mater.*, **14**(5), 339-343 (2002).
35. "Effect of Low Surface Energy Chain Ends on the Glass Transition Temperature of Polymer Thin Films", Fengchao Xie, H. F. Zhang, Fuk Kay Lee, Binyang Du, Ophelia K. C. Tsui, Y. Yokoe, K. Tanaka, A. Takahara, T. Kajiyama, Tianbai He, *Macromolecules*, **35**(5), 1491-1492 (2002).
36. "Effect of Chain Ends and Chain Entanglement on Glass Transition Temperature of Polymer Thin Films", O.K.C. Tsui, H. F. Zhang, *Macromolecules*, **34**(26) 9139-9142 (2001).
37. "Rubbing Induced Molecular Alignment and Its Relaxation in Polystyrene Thin Films", O.C. Tsang, Fengchao Xie, O.K.C. Tsui, Z. Yang, Jianmin Zhang, Deyan Shen, Xiaozhen Yang *J. Polym. Sci: Polym. Phys.*, **39**(22), 2906-2914 (2001).
38. "Effect of Interfacial Interactions on the Glass Transition of Polymer Thin Films", O.K.C. Tsui, T.P. Russell, C.J. Hawker, *Macromolecules*, **34**(16), 5535-5539 (2001).
39. "Surface Viscoelasticity Studies of Ultrathin Polymer Films Using Atomic Force Microscopic Adhesion Measurements", X. P. Wang, Xudong Xiao, O.K.C. Tsui, *Macromolecules*, **34**(12), 4180-4185 (2001).
40. "Study of Elastic Modulus and Yield Strength of Polymer Thin Films Using Atomic Force Microscopy", Binyang Du, Ophelia K.C. Tsui, Qingling Zhang, and Tianbai He, *Langmuir*, **17**, 3286-3291 (2001).
41. "Temporal Evolution of Relaxation in Rubbed Polystyrene Thin Films", O. C. Tsang, O.K.C. Tsui, Z. Yang, *Phys. Rev. E*, **63**, 061603 (2001).
42. "Nanostructure and Mechanical Measurement of Highly Oriented Lamellae of Melt-drawn HDPE by Scanning Probe Microscopy", Binyang Du, Jian Zhang, Qingling Zhang, Decai Yang, Tianbai He, Ophelia K. C. Tsui, *Macromolecules* **33**, 7521-7528 (2000).

43. "Studying Surface Glass-to-Rubber Transition Using Atomic Force Microscopic Adhesion Measurements", O.K.C. Tsui, X. P. Wang, Jacob Y. L. Ho, T. K. Ng, Xudong Xiao, *Macromolecules*, **33**, 4198 (2000).
44. "Observation of Inverted Phases in Poly(styrene-b-butadiene-b-styrene) Triblock Copolymer by Solvent-Induced Order-Disorder Phase Transition", Qingling Zhang, O.K.C. Tsui, Binyang Du, Fajun Zhang, Tao Tang, Tianbai He, *Macromolecules*, **33**, 9561-9567 (2000).
45. "Phase Coherence and Microphase Separation Transitions in Diblock Copolymer Thin Films", P. Mansky, O.K.C. Tsui, T. P. Russell, Y. Gallot, *Macromolecules*, **32**, pp. 4832-4837 (1999).
46. S. P. Bayrakci, O.K.C. Tsui, N. P. Ong, K. Kishio, S. Watauchi, "The Josephson Plasma Resonance in $Bi_2Sr_2CaCu_2O_{8+\delta}$ as a Probe of Vortex Correlation", *Europhys. Lett.*, **46**, pp. 68-74 (1999).
47. "Dynamics of Concentrated Colloidal Suspensions Probed by X-ray Intensity Fluctuation Spectroscopy", O.K.C. Tsui, and S. G. J. Mochrie, *Phys. Rev.* **E57**, pp.2030-2034 (1998).
48. "Statistical Analysis of X-ray Speckle at the NSLS", Ophelia K.C. Tsui, S. G. J. Mochrie, and L. E. Berman, *J. Synch. Radiation* **5**, pp.30-36 (1998).
49. "Josephson Plasma Resonance and Anomalous Hysteresis in the Vortex Lock-in State in $Bi_2Sr_2CaCu_2O_{8+\delta}$", O.K.C. Tsui, S. P. Bayrakci, N. P. Ong, K. Kishio, S. Watauchi, *Physica C*, **293**, Iss. 1-4, pp 259-263 (1997).
50. "The Josephson Plasma Resonance as a 'Scattering' Probe of Vortex Correlation in the Liquid State", N. P. Ong, S. P. Bayrakci, O.K.C. Tsui, K. Kishio, S. Watauchi, Physical C 293, pp. 20-24 (1997).
51. "Anomalous Hysteresis in Josephson Plasma Resonance of $Bi_2Sr_2CaCu_2O_{8+\delta}$ for Field Close to Alignment with the *ab*-plane", O.K.C. Tsui, S. P. Bayrakci, N. P. Ong, K. Kishio, S. Watauchi, *Phys. Rev.* **B56**, pp. R2948-R2951 (1997).
52. "Linewidth of *c*-axis Plasma Resonance in Josephson-coupled Superconductors", L. N. Bulaevskii, D. Dominguez, M. P. Maley, A. R. Bishop, O.K.C. Tsui, N. P. Ong, *Phys. Rev.* **B54**, pp. 7521-7535 (1996).
53. "The Josephson Plasma Mode in $Bi_2Sr_2CaCu_2O_{8+\delta}$ and Quasi-particle Mean-Free-Path in $YBa_2Cu_3O_7$", O.K.C. Tsui, K. Krishana, J. M. Harris, N. P. Ong, *Physica C*, **263**, pp. 381-388 (1996).
54. "Experiments on the Josephson Plasma Mode in $Bi_2Sr_2CaCu_2O_{8+\delta}$ and the Thermal Hall Conductivity in $YBa_2Cu_3O_7$", N. P. Ong, O.K.C. Tsui, K. Krishana, J. M. Harris and J. B. Peterson, *Chin. J. of Phys.*, **34**, pp. 432-446 (1996).
55. "Excitation of Josephson Plasma Resonance in $Bi_2Sr_2CaCu_2O_{8+\delta}$ in an oblique field", Ophelia K.C. Tsui, N. P. Ong, J. B. Peterson, *Phys. Rev. Lett.* **76**, pp.819-822 (1996).
56. "Sharp Magnetoabsorption Resonances in the Vortex State of $Bi_2Sr_2CaCu_2O_{8+\delta}$", Ophelia K.C. Tsui, N. P. Ong, Y. Matsuda, Y. F. Yan and J. B. Peterson, *Phys. Rev. Lett.* **73**, pp.724-727 (1994).
57. "Hall Angle Evidence for the Superclean Regime in 60K $YBa_2Cu_3O_{6+y}$", J. M. Harris, Y. F. Yan, O.K.C. Tsui, Y. Matsuda and N. P. Ong, *Phys. Rev. Lett.* **73**, pp.1711-1714 (1994).
58. "Detection of Superconducting Transitions of Multi-Phase $(Bi,Pb)_2Sr_2CaCu_2O_8$ Ceramics by Photothermal Detection Technique", K.C. Tsui, P. C. W. Fung, H. L. Tam, G. O. Walker, *J. Phys. Chem. Solids*, **52**, pp. 979-983 (1991).
59. "Polymer Flows Better in Nanometer Films", Y. J. Wang, F. K. Lee, C. -H. Lam, and O. K. C. Tsui (submitted).

Patent

1. "A Liquid Crystal Alignment Layer and Methods of Making Thereof", H. S. Kwok, Fion S. Y. Yeung, F. Xie, O. K. C. Tsui and P. Sheng, Patent no. WO2005116742 and US Patent Application no. 20050260426.

Book Chapters

1. "Anomalous Dynamics of Polymer Films", O. K. C. Tsui, in *Polymer Thin Films*, eds. O. K. C. Tsui and T. P. Russell, ISBN 978-981-281-881-2, World Scientific (Singapore, pending).
2. "Dynamics of Polymers Confined in Thin Films", O.K.C. Tsui, In *Recent Advances of Polymer Science Overseas*, eds. Tianbai He and Hangjie Hu, Chemical Industry Publishing Co., Beijing, Chapter 16, pp. 246-263 (2001).
3. "Manipulating Copolymers with Confinement and Interfacial Interactions", O.K.C. Tsui, E. Huang, L. Rockford, T. P. Russell, *ACS Symposium Series* 736, *Supramolecular Structure in Confined Geometries*, Eds. S. Manne and G. G. Warr, American Chemical Society, Washington DC, pp.140-152 (1999).
4. "Some Thermodynamic Considerations of the Lower Critical Ordering of Diblock Copolymers", M. Pollard, O.K.C. Tsui, T. P. Russell, A. V. Ruzette, A. M. Mayes, Y. Gallot, Chapter 17, American Chemical Society Symposium Series No. 739 *Scattering from Polymers*: *Characterization by X-rays, Neutrons, and Light*, Eds. Cebe, Hsiao and Lohse (1999).

Invited Talks

1. "Examination of Non-liquidlike Behaviors in Polymer Ultrathin Films", *PolyFilm 2008: Confined polymer films*, Sheffield, UK (September 8-12, 2008).
2. "Liquid Crystal Alignment by Optical Interference and Its Application for Making Phase Diffraction Gratings", *International Workshop on Light-Controlled Liquid Crystalline Complex Adaptive Materials* (LC2CAM), University of Colorado, Boulder, CO (August 6-10, 2008).
3. "Surface Capillary Waves on Polymer Films", Ophelia K. C. Tsui, a colloquium was presented in the Department of Physics, Worcester Polytechnic Institute, Worcester, MA (Jan 21, 2008).
4. "Stability of Polymer Films Interpreted as a Phase Separation Problem in Two Dimensions", Ophelia K. C. Tsui, an invited talk was presented in *the 9th Annual Greater Boston Area Statistical Mechanics Meeting*, Brandeis University (Oct. 13, 2007).
5. "Equilibrium Pathway of Spin-Coated Polymer Films", Ophelia K. C. Tsui, a condensed matter seminar was presented in the Department of Physics, Boston University, Boston, MA (Oct. 12, 2007).
6. "Surface Capillary Waves on Polymer Films", Ophelia K. C. Tsui, a seminar was presented in the Department of Polymer Science and Engineering, University of Massachusetts in Amherst (March 23, 2007).
7. "Can Rupturing Stability of Polymer Films be Predicted?", Ophelia K. C. Tsui, an invited talk was presented in the 3rd International Workshop on Dynamics in Confinement, Grenoble, France (March 23-26, 2006).
8. "Some Observations from Spindal Surface Fluctuations on Thin Films", Ophelia K. C. Tsui, a 20 mins. invited talk was presented in the *Day Meeting on Statistical Physics*, Baptist University, HK (Nov. 8, 2005).
9. "Spinodal Surface Fluctuations on Polymer Films", Ophelia K. C. Tsui, a 30 mins. invited talk was presented at the *5th International Discussion Meeting on Relaxations in Complex Systems*, Lille, France (July 7-13, 2005).
10. "Spinodal Surface Fluctuations on Polymer Films", Ophelia K. C. Tsui, a 45 mins. invited talk was presented at the Institute of Chemistry, Chinese Academy of Sciences (April 13, 2005).

11. "Two Examples of Atomic Force Microscope's Applications in Nano Science and Technology", Department of Mechanical Engineering, University of Hong Kong (Dec. 15, 2004).
12. "Liquid Crystal Alignment by Inhomogeneous Substrate Surface Patterning", Department of Physics, Chinese University of Hong Kong (October 15, 2004).
13. "Liquid Crystal Alignment by Substrate Nano-Patterning", Department of Physics, University of Hong Kong (May 21, 2004).
14. "Liquid Crystal Alignment by Inhomogeneous Substrate Surface Patterning", Department of Physics, Hong Kong University of Science & Technology (April, 2004).
15. "Dewetting Instability of Polymer Thin Films", The *3rd East Asia Polymer Conference*, Chengdu, China (June 7-14 2004).
16. "Liquid Crystal Alignment by Inhomogeneous Substrate Surface Patterning", Department of Physics, Baptist University of Hong Kong (March 2, 2004).
17. "Dewetting Instability of Polymer Thin Films", Princeton Materials Institute, Princeton University, Princeton, USA (Mar 12, 2003).
18. "Effect of the Air and Substrate Interface on the Glass Transition of Polymer Films Supported by Substrates", National Institute of Standards and Technology, Gaithersburg, Washington DC, USA (March 11, 2003).
19. "Effect of the Air and Substrate Interface on the Glass Transition Temperature of Polymer Films Supported by Substrates", O. K. C. Tsui, a 45 min. invited talk was presented at the workshop on *Physics of Thin Film & Surfaces*, Institute of Materials Research and Engineering (IMRE), Singapore (Jan 13, 2003).
20. "An Overview on Recent Dynamical Studies of Polymer Films", O. K. C. Tsui, a 45 min. invited talk was presented at the workshop on *Physics of Thin Film & Surfaces*, Institute of Materials Research and Engineering (IMRE), Singapore (Jan 13, 2003).
21. "Dewetting of Polymer Films with Built-in Topographical Fluctuations", *International Symposium on Polymer Physics PP'2002*, Qingdao, China (July 2-6, 2002).
22. "Dewetting of Polymer Films with Built-in Topographical Fluctuations", O. K. C. Tsui, a 15 min. invited talk was presented in the Symposium on Nano & MEMS Science and Technology, National Tsing Hua University, Taiwan (April 17-18, 2002).
23. "Distinguishing Spinodal and Nucleation Dewetting by Built-in Topographical Fluctuations", O. K. C. Tsui, a 1-hr invited talk was presented in the Department of Macromolecular Science, Fudan University, Shanghai, China (Jan. 18, 2002).
24. "Distinguishing Spinodal and Nucleation Microphase Separation in Dewetting Polymer Films", O. K. C. Tsui, a 1-hr invited talk was presented in the Chemistry Department, Jilin University, Jilin, China (Jan. 15, 2002).
25. "Instabilities of Polymer Films with Topographical Defects", O. K. C. Tsui, a 1-hr invited talk was presented in the physics department, Hong Kong Polytechnic University, Hong Kong (Dec. 6, 2001).
26. "Instability of Polymer Liquid Films with Built-in Topographical Fluctuations", *2001 National Symposium on Polymer*, Zhengzhou, China (October 12-16, 2001).
27. "Effect of Film Thickness and Tip Structure on Dynamical Studies of Polymer Ultrathin Films Using Atomic Force Microscopic Adhesion Measurements", the *American Chemical Society International Meeting: Pacifichem 2000, Symposium on Polymer Thin Film Interfaces*, Honolulu, Hawaii, U.S.A (December 14-19, 2000).
28. "Dynamical Studies of Viscoelastic Ultrathin Films Using Atomic Force Microscopic Adhesion Measurements and the Related Mechanical Problems", O. K. C. Tsui, a 30-minute invited talk was presented in the *PP'2000 Huangshan International Symposium on Polymer Physics*, Huangshan, China (September 13-17, 2000).

29. "Effect of Chain Ends and Entanglement on Segmental Mobility of Polymers Under Confinement", O. K. C. Tsui, H. F. Zhang, and Edmond W. T. Leung, a 30-minute invited talk was presented in *The Third Joint Meeting of Chinese Physicists World-Wide*, Hong Kong, China (July 31-Aug 4, 2000).
30. "Observation of a Novel Inverted Phase through Kinetic Ordering of Solvent Cast Poly(styrene-*b*-butadiene-*b*-styrene) Triblock Copolymers", O. K. C. Tsui, Q. Zhang, H. F. Zhang, and Tianbai He, a 15-minute invited talk was presented in the *NSFC Key Topics - Structure, Scaffold and Functionality of Assemblies of Organizable Molecules with Advanced Structures*, Beijing, China (April 27-28, 2000).
31. "Glass-to-Rubber Transition of Polymer Thin Films and Their Surface Dynamical Properties", O. K. C. Tsui, X. P. Wang, H. F. Zhang, and Xudong Xiao, a 30-minute invited talk was presented in the 1999 *Second Symposium of Young Chinese Scholars on Materials Science and Technology*, Hangzhou, China (October 11, 1999).
32. "Are Polystyrene Thin Films Really Glassy Below 100^{o}C?", a 30-minute invited talk was presented in the *1999 National Symposium on Polymer*, Jiaotong University of Shanghai (May 12, 1999).
33. "Glass Transition of Polymer Thin Films", a 45-minute seminar was presented in the Physics Department, University of Massachusetts, Amherst, MA (December 3, 1998).
34. "Dynamics of Concentrated Colloidal Suspensions Probed by X-ray Correlation Spectroscopy", The *28th Annual Meeting of the Fine Particle Society*, Dallas, Texas (April 2, 1998).
35. "Plasma Resonance and Anomalous Hysteresis in Vortex Lock-in State of $Bi_2Sr_2CaCu_2O_{8+\delta}$", *Workshop on Flux, Quantum, and Mesoscopic Effects in Superconducting Materials and Devices*, Santa Fe, NM (August 4-8, 1997).
36. "Statistical Analysis of X-ray Speckles at NSLS X25", a 45-minute invited talk was presented in *Workshop on Advances in X-ray Photon Correlation Spectroscopy, NSLS 1997 Annual Users' Meeting*, Brookhaven National Laboratory, Upton, NY (May 19, 1997).
37. "Exication of Josephson Plasma Resonance in $Bi_2Sr_2CaCu_2O_{8+\delta}$ in a magnetic field", *SPIE's Photonics West '96 Symposium on Oxide Superconductor Physics and Nano-Engineering II*, San Jose, CA (Feburary 1, 1996).
38. "Sharp Magnetoabsorption Resonances in the Vortex State of $Bi_2Sr_2CaCu_2O_{8+\delta}$", *The 1995 APS March Meetings*, San Jose, CA (March 24, 1995).