PUBLICATION LIST OF PING SHENG

Books

Monograph:

"Introduction to Wave Scattering, Localization, and Mesoscopic Phenomena," 2nd Edition, **Ping Sheng** (Springer, Heidelberg, 2006) 333 pages.

"Introduction to Wave Scattering, Localization, and Mesoscopic Phenomena," **Ping Sheng** (Academic Press, Boston, 1995) 340 pages.

Edited:

"Nanoscale Phenomena: Basic Science to Device Applications," Z. K. Tang and **Ping Sheng**, edits. Springer, New York, 2008) 248 pages.

"Nano Science and Technology: Novel Structures and Phenomena," Z. K. Tang and **Ping Sheng**, edits. (Taylor and Francis, London, 2003).

Proceedings of the Fifth International Conference on Electrical Transport and Optical Properties of Inhomogeneous Media, P. M. Hui, **Ping Sheng**, L.-H. Tang, edits. *Physica B* (Condensed Matter) volume 279, Nos. 1-3 (North-Holland, the Netherlands, 2000).

"Physics and Chemistry of Nanostructured Materials," S. H. Yang and **Ping Sheng,** edits. (Taylor and Francis, London, 2000).

"Energy and the Environment," B. Abeles, A. Jacobson and **Ping Sheng**, edits. (World Scientific Publishing Co., Inc. Singapore, 1992).

"Physical Phenomena in Granular Materials," G. D. Cody, T. H. Geballe and **Ping Sheng**, edits. (Materials Research Society, Pittsburgh, PA, 1990).

"Scattering and Localization of Classical Waves in Random Media," **Ping Sheng**, editor (World Scientific Publishing Co., Inc. Singapore, 1990).

"Introduction to Liquid Crystals," E. B. Priestly, P. J. Wojtowicz and **Ping Sheng**, edits. (Plenum Press, N. Y. 1976).

Book Chapters:

"Theoretical Study of Superconductivity in 4-Angstrom Carbon Nanotube Arrays," T. Zhang, M. Y. Sun, Z. Wang, W. Shi, R. Lortz, Z. K. Tang, N. Wang and **Ping Sheng**, J. J. Haruyama (ed.) (Pan Standford Publishing, USA, 2015) p.1-35.

Dynamic Mass Density and Acoustic Metamaterials, J. Mei, G. Ma, M. Yang, Z. Yang and **Ping Sheng**, *Acoustic Metamaterials and Phononic Crystals*, Springer Series in Solid-State Sciences 173, P.A. Deymier (ed.) (2013) p. 159-199.

Book Review

1. Interactions in Solids, Book Review of Magnetic Resonance in Metals by J. Wintrer, **Ping Sheng**, *Science* 176, 903 (1972).

Physical Review Letters

1. Inducing and Manipulating Heteroelectronic States in a Single MoS_2 Thin Flake, Q. H. Chen, J. M. Lu, L. Liang, O. Zheliuk, A. Ali, **Ping Sheng** and J. T. Ye, *Phys. Rev. Lett.* 119, 147002 (2017).

2. Direct Measurement of Friction of a Fluctuating Contact Line, S. Guo, M. Gao, X. M. Xiong, Y. J. Wang, W. P. Wang, **Ping Sheng** and P. Tong, *Phys. Rev. Lett.* 111, 026101 (2013).

3. Coupled Membranes with Doubly Negative Mass Density and Bulk Modulus, M. Yang, G. C. Ma, Z. Y. Yang and **Ping Sheng,** *Phys. Rev. Lett.* 110, 134301 (2013).

4. Large-scale Mesoscopic Transport in Nanostructured Graphene, H. J. Zhang, J. M. Lu, W. Shi, Z. Wang, T. Zhang, M .Y Sun, Y. Zheng, Q. H. Chen, N. Wang, J. J. Lin, **Ping Sheng**, *Phys. Rev. Lett.* 110, 066805 (2013).

5. Giant Electrorheological Effect: A Microscopic Mechanism, S. Chen, X. Huang, N. F. A. van der Vegt, W. Wen and **Ping Sheng**, *Phys. Rev. Lett.* 105, 046001 (2010).

6. Membrane-Type Acoustic Metamaterial with Negative Dynamic Mass, Z. Yang, J. Mei, M. Yang, N. H. Chan and **Ping Sheng**, *Phys. Rev. Lett.* 101, 204301 (2008).

7. Electrorheological Fluid Dynamics, J. Zhang, X. Gong, C. Liu, W. Wen and **Ping Sheng**, *Phys. Rev. Lett.* 101, 194503 (2008).

8. Resonant Raman Scattering of the Smallest Single-Walled Carbon Nanotubes, Z. K. Tang, J. P. Zhai, Y. Y. Tong, X. J. Hu, R. Saito, Y. J. Feng and **Ping Sheng**, *Phys. Rev. Lett.* 101, 047402 (2008).

9. Surface Resonant-States-Enhanced Acoustic Wave Tunneling in Two-Dimensional Phononic Crystals, M. Ke, Z. He, S. Peng, Z. Liu, J. Shi, W. Wen and **Ping Sheng**, *Phys. Rev. Lett.* 99, 044301 (2007).

10. Hybrid Approach to High-Frequency Microfluidic Mixing, X. Niu, L. Liu, W. Wen and **Ping Sheng**, *Phys. Rev. Lett.* 97, 044501 (2006).

11. Effective Mass Density of Fluid-Solid Composites, J. Mei, Z. Liu, W. Wen and **Ping Sheng**, *Phys. Rev. Lett.* 96, 024301 (2006).

12. Electromagnetic-Wave Tunneling Through Negative-Permittivity Media with High Magnetic Fields, L. Zhou, W. Wen, C. T. Chan and **Ping Sheng**, *Phys. Rev. Lett.* 94, 243905 (2005).

13. Power-Law Slip Profile of the Moving Contact Line in Two-Phase Immiscible Flows, T. Qian, X. P. Wang and **Ping Sheng**, *Phys. Rev. Lett.* 93, 094501 (2004).

14. Focusing of Sound in a 3D Phononic Crystal, S. Yang, J. H. Page, Z. Liu, M. L. Cowan, C. T. Chan and **Ping Sheng**, *Phys. Rev. Lett.* 93, 024301 (2004).

15. Liquid Crystal Orientation Transition on Microtextured Substrates, B. Zhang, F. K. Lee, O. K.

C. Tsui and **Ping Sheng**, *Phys. Rev. Lett.* 91, 215501 (2003).

16. Full Waveform Inversion with Optimal Basis Functions, G. Sun, Q. Chang and **Ping Sheng**, *Phys. Rev. Lett.* 90, 104301 (2003).

17. Photonic Band Gap from a Stack of Positive and Negative Index Materials, J. Li, L. Zhou, C. T. Chan and **Ping Sheng**, *Phys. Rev. Lett.* 90, 83901 (2003).

18. Subwavelength Photonic Band Gaps from Planar Fractals, W. Wen, L. Zhou, J. Li, W. Ge, C. T. Chan and **Ping Sheng**, *Phys. Rev. Lett.* 89, 223901 (2002).

19. Ultrasound Tunneling through 3D Phononic Crystals, S. Yang, J. H Page, Z. Liu, M. L. Cowan, C. T. Chan and **Ping Sheng**, *Phys. Rev. Lett*. 88, 104301 (2002).

20. Giant Hall Effect in Nonmagnetic Granular Metal Films, X. X. Zhang, C. Wan, H. Liu, Z. Q. Li, **Ping Sheng** and J. J. Lin, *Phys. Rev. Lett.* 86, 5562 (2001).

21. Planar Magnetic Colloidal Crystals, W. Wen, L. Zhang and **Ping Sheng**, *Phys. Rev. Lett*. 85, 5464 (2000).

22. Robust Photonic Band Gap from Tunable Scatterers, W. Y. Zhang, X. Y. Lei, Z. L. Wang, D. G. Zheng, W. Y. Tam, C. T. Chan, and **Ping Sheng**, *Phys. Rev. Lett.* 84, 2853 (2000).

23. Field Induced Structural Transition in Mesocrystallites, W. Wen, N. Wang, H. Ma, Z. Lin, W. Y. Tam, C. T. Chan, and **Ping Sheng**, *Phys. Rev. Lett*. 82, 4248 (1999).

24. Schriemer *et al.* Reply:, H. P. Schriemer, M. L. Cowan, J. H. Page, **Ping Sheng**, Z. Y. Liu, and D. A. Weitz, *Phys. Rev. Lett.*82, 2000 (1999) – A Reply to the "Comment on "Energy Velocity of Diffusing Waves in Strongly Scattering Media"" by C. M. Soukoulis *et al.*

25. Ground States of Magnetorheological Fluids, L. Zhou, W. Wen, and **Ping Sheng,** *Phys. Rev. Lett.* 81, 1509 (1998).

26. Energy Velocity of Diffusing Waves in Strongly Scattering Media, H. P. Schriemer, M. L. Cowan, J. H. Page, **Ping Sheng**, Z. Y. Liu, and D. A. Weitz, *Phys. Rev. Lett.* 79, 3166 (1997).

27. New Electrorheological Fluid: Theory and Experiment, W. Y. Tam, G. H. Yi, W. Wen, H. Ma, M. M. T. Loy, and **Ping Sheng**, *Phys. Rev. Lett.* 78, 2987 (1997).

28. Liquid-Crystal Phase Transitions Induced by Microtextured Substrates, T. Z. Qian and **Ping Sheng**, *Phys. Rev. Lett.* 77, 4564 (1996).

29. Frequency Dependent Electrorheological Properties: Origin and Bounds, H. Ma, W. Wen, W. Y. Tam and **Ping Sheng**, *Phys. Rev. Lett.* 77, 2499 (1996).

30. Is a Layered Medium One Dimensional?, **Ping Sheng** and Z. Q. Zhang, *Phys. Rev. Lett.* 74, 1343 (1995).

31. Phonon Transport in Strong-Scattering Media, **Ping Sheng**, M. Zhou and Z. Q. Zhang, *Phys. Rev. Lett.* 72, 234 (1994).

32. Shear Rigidity Percolation in 2D Solid-Liquid Composites, M. Zhou and **Ping Sheng**, *Phys. Rev. Lett.* 71, 4358 (1993).

33. Nematic-Isotropic Phase Transition: An Extended Mean Field Theory, R. Tao, **Ping Sheng**

and Z. F. Lin, *Phys. Rev. Lett.* 70, 1271 (1993).

34. Observation of Bending-Wave Localization and Quasi Mobility Edge in Two Dimensions, L. Ye, G. Cody, M. Zhou, **Ping Sheng** and A. N. Norris, *Phys. Rev. Lett.* 69, 3080 (1992).

35. Superdiffusive Transport and Metal-Insulator Transition in Two Dimensions, Z. Q. Zhang and **Ping Sheng**, *Phys. Rev. Lett.* 67, 2541 (1991).

36. Theorimages/stories/Erratum to Dynamic Permeability in Porous Media.pdfy of Acoustic Excitations in Colloidal Suspensions, X. D. Jing, **Ping Sheng** and M. Y. Zhou, *Phys. Rev. Lett*. 66, 1240 (1991).

37. Novel Acoustic Excitations in Suspensions of Hard-Sphere Colloids, J. Liu, L. Ye, D. A. Weitz and **Ping Sheng**, *Phys. Rev. Lett*. 65, 2602 (1990).

38. Dynamics of Immiscible Fluids Displacement in a Capillary Tube, M. Y. Zhou and **Ping Sheng**, *Phys. Rev. Lett*. 64, 882 (1990).

39. Localization Transition in Media with Anisotropic Diagonal Disorder, W. Xue, **Ping Sheng**, Z. Q. Zhang and Q. J. Chu, *Phys. Rev. Lett*. 63, 2837 (1989).

40. Probing Through Cloudiness: Theory of Statistical Inversion for Multiply-Scattered Data, B. White, **Ping Sheng**, M. Postel, and G. Papanicolaou, *Phys. Rev. Lett.* 63, 2228 (1989).

41. Scaling Function for Dynamic Permeability in Porous Media: Sheng et al. Reply, **Ping Sheng**, M. Y. Zhou, E. Charlaix, A. P. Kushnick, and J. P. Stokes, *Phys. Rev. Lett.* 63, 581 (1989).

42. Dynamic Rigidity Percolation in Inverted Micelles, L. Ye, D. Weitz, **Ping Sheng**, S. Bhattacharya, J. Huang, and M. Higgins, *Phys. Rev. Lett*. 63, 263 (1989).

43. Erratum, **Ping Sheng** and M. Y. Zhou, *Phys. Rev. Lett*. 61, 2391 (1988) – A correction to the "Dynamic Permeability in Porous Media" by Ping Sheng and M. Y. Zhou.

44. Dynamic Permeability in Porous Media, **Ping Sheng** and M. Y. Zhou, *Phys. Rev. Lett*. 61, 1591 (1988).

45. Local-Field Distribution in Random Dielectric Media, **Ping Sheng** and Z. Chen, *Phys. Rev. Lett.* 60, 227 (1988).

46. Brewster Anomalies: A Polarization-Induced Delocalization Effect, J. Sipe, **Ping Sheng**, B. White and M. H. Cohen, *Phys. Rev. Lett*. 60, 108 (1988).

47. Wave Localization Characteristics in the Time Domain, B. White, **Ping Sheng**, Z. Q. Zhang and G. Papanicolaou, *Phys. Rev. Lett*. 59, 1918 (1987).

48. Scalar Wave Localization in a Two-Component Composite, **Ping Sheng** and Z. Q. Zhang, *Phys. Rev. Lett*. 57, 1879 (1986).

49. Multiple Scattering Noise in One Dimension: Universality Through Localization Length Scaling, **Ping Sheng**, Z. Q. Zhang, B. White and G. Papanicolaou, *Phys. Rev. Lett*. 57, 1000 (1986).

50. Density of Localized States Near the Band Edge of Disordered Systems, Z. Q. Zhang and **Ping Sheng**, *Phys. Rev. Lett*. 57, 909 (1986).

51. Localization in One-Dimensional Disordered Systems in the Presence of an Electric Field, C. Soukoulis, J. V. Jose, E. N. Economou and **Ping Sheng**, *Phys. Rev. Lett*. 50, 764 (1983).

52. Theory for the Dielectric Function of Granular Composite Media, **Ping Sheng**, *Phys. Rev. Lett.* 45, 60 (1980).

53. Fluctuation-Induced Tunneling Conduction in Carbon-Polyvinylchloride Composites, **Ping Sheng**, E. K. Sichel and J. Gittleman, *Phys. Rev. Lett*. 40, 1197 (1978).

54. Phase Transition in Surface-Aligned Nematic Films, **Ping Sheng**, *Phys. Rev. Lett*. 37, 1059 (1976).

55. Hopping Conductivity in Granular Metals, **Ping Sheng**, B. Abeles and Y. Arie, *Phys. Rev. Lett.* 31, 44 (1973).

56. New Technique for the Measurement of Magnetic Critical Exponent β, **Ping Sheng,** C. N. Manicoupolous and T. R. Carver, *Phys. Rev. Lett*. 30, 234 (1973).

57. Voltage-Induced Tunneling Conduction in Granular Metals at Low Temperatures, **Ping Sheng** and B. Abeles**,** *Phys. Rev. Lett*. 28, 34 (1973).

Multidisciplinary Journals

1. Generalized causality constraint based on duality symmetry reveals untapped potential of sound absorption, S. C. Qu, M. Yang, S. B. Huang, S. H. Liu, E. Q. Dong, H. Y. Li, **Ping Sheng,** I. D. Abrahams, N. X. Fang, *Nat. Commun*. 16, 10749 (2025).

2. Underwater Metamaterial Absorber with Impedance-matched Composite, S. C. Qu, N. Gao, A. Tinel, B. Morvan, V. Romero-García, J.-P. Groby, **Ping Sheng**, *Sci. Adv*. 8, eabm4206 (2022).

3. Conceptual-based Design of an Ultrabroadband Microwave Metamaterial Absorber, S. C. Qu, Y. X. Hou, **Ping Sheng**, *PNAS* 118 (36), e2110490118 (2021).

4. Shaping Reverberating Sound Fields with an Actively Tunable Metasurface, G. C. Ma, X. Y. Fan, **Ping Sheng** and M. Fink, *Proceedings of the National Academy of Sciences* 115 (26), 6638 (2018).

5. Towards Anti-Casual Green's Function for Three-dimensional Sub-diffraction Focusing, G. C. Ma, X. Y. Fan, F. Y. Ma, J. de Rosny, **Ping Sheng** and M. Fink, *Nat. Phys*. 14, 608 (2018).

6. High-flux Water Desalination with Interfacial Salt Sieving Effect in Nanoporous Carbon Composite Membranes, W. Chen, S. Y. Chen, T. F. Liang, Q. Zhang, Z. L. Fan, H. Yin, K. W. Huang, X. X. Zhang, Z. P. Lai and **Ping Sheng**, *Nat. Nanotechnol*. 13, 345 (2018).

7. Polarization Bandgaps and Fluid-like Elasticity in Fully Solid Elastic Metamaterials, G. C. Ma, C. X. Fu, G. H. Wang, P. Hougne, J. Christensen, Y. Lai, **Ping Sheng**, *Nat. Commun*. 7, 13536 (2016).

8. Theoretical Requirements for Broadband Perfect Absorption of Acoustic Waves by Ultra-thin Elastic Meta-films, Y. T. Duan, J. Luo, G. G. Wang, Z. H. Hang, B. Hou, J. Li, **Ping Sheng** and Y. Lai, *Sci. Rep.* 5, 12139 (2015).

9. Geometric Phase and Band Inversion in Periodic Acoustic Systems, G. C. Ma, Z. Y. Yang, **Ping Sheng**, Z. Q. Zhang and C. T. Chan, *Nat. Phys.* 11, 240–244 (2015).

10. Probing the Electron States and Metal-insulator Transition Mechanisms in Molybdenum Disulphide Vertical Heterostructures, X. L. Chen, Z. F. Wu, S.G. Xu, L. Wang, R. Huang, Y Han, W. G. Ye, W. Xiong, T. Y. Han, G. Long, Y. Wang, Y. H. He, Y. Cai, **Ping Sheng** and N. Wang, *Nat. Commun.* 6, 6088 (2015).

11. A Surface Potential Trap Model for the Electric Double Layer at Solid-Liquid Interfaces, W. Li, S. X. Xu, M. J. Liao, C. Liu and **Ping Sheng**, *Wuli* 43, 592-596 (2014).

12. Acoustic Metasurface with Hybrid Resonances, G. C. Ma, M. Yang, S. W. Xiao, Z. Y. Yang and **Ping Sheng**, *Nat. Mater.* 13, 873-878 (2014).

13. Large-scale Mesoscopic Transport in Nanostructured Graphene, H. J. Zhang and **Ping Sheng**, *Wuli* 42 (7), 456-467 (2013).

14. Density of States and Its Local Fluctuations Determined by Capacitance of Strongly Disordered Graphene, W. Li, X. L. Chen, L. Wang, Y. H. He, Z. F. Wu, Y. Cai, M. W. Zhang, Y. Wang, Y. Han, R. Lortz, Z. Q. Zhang, **Ping Sheng**, and N. Wang, *Sci. Rep*. 3, 1772 (2013).

15. Dark Acoustic Metamaterials as Super Absorbers for Low-frequency Sound, J. Mei, G. Ma, M. Yang, Z. Yang, W. Wen and **Ping Sheng**, *Nat. Commun.* 3, 756 (2012).

16. Superconductivity in Bundles of Double-Wall Carbon Nanotubes, W. Shi, Z. Wang, Q. Zhang, Y. Zheng, C. Ieong, M. Q. He, R. Lortz, , Y. Cai, N. Wang, T. Zhang, H. J. Zhang, Z. K. Tang, **Ping Sheng**, H. Muramatsu, Y. A. Kim, M. Endo, P. T. Araujo, and M. S. Dresselhaus, *Sci. Rep* 2, 625 (2012).

17. Hybrid Elastic Solids, Y. Lai, Y. Wu, **Ping Sheng** and Z. Zhang, *Nat. Mater.* 10, 620-624 (2011).

18. Membrane-type Acoustic Metamaterial with Negative Dynamic Mass, J. Mei, M. Yang, Z. Yang, N. H. Chan and **Ping Sheng**, *Wuli* 39 (4), 243-247 (2010).

19. Metamaterials: Acoustic Lenses to Shout About, **Ping Sheng**, *Nat. Mater.* 8, 928-929 (2009).

20. Superconducting Characteristics of 4-Å Carbon Nanotube–zeolite Composite, R. Lortz, Q. Zhang, W. Shi, J. T. Ye, C. Qiu, Z. Wang, H. He, T. Qian, Z. Tang, N. Wang, X. Zhang, J. Wang, C. T. Chan, and **Ping Sheng**, *Proc. Natl. Acad. Sci.* 18, 7299-7303 (2009).

21. Dynamic Mass Density and Acoustic Metamaterials, **Ping Sheng**, J. Mei, Z.-Y. Liu and W. J. Wen, *Wuli* 36, 1-6 (2007).

22. Waves on the Horizon, **Ping Sheng**, *Science* 313, 1399-1400 (2006).

23. Microfluidic Chips, W. J. Wen and **Ping Sheng**, *Wuli* 35, 907-910 (2006).

24. Local Resonance Induced Wave Functional Materials, W. J. Wen and **Ping Sheng**, *Wuli* 33, 106-110 (2004).

25. The Giant Electrorheological Effect and its Mechanism, W. J. Wen, X. X. Huang, S. H. Yang, K. Q. Lu and **Ping Sheng**, *Wuli* 32, 777-779 (2004).

26. The Giant Electrorheological Effect in Suspensions of Nanoparticles, W. Wen, X. Huang, S. Yang, K. Lu, and **Ping Sheng**, *Nat. Mater.* 2, 727-730 (2003).

27. Superconductivity in 4-Å Single-Walled Carbon Nanotubes, Z. K. Tang, L. Zhang, N. Wang, X. X. Zhang, G. H. Wen, G. D. Li, J. N. Wang, C. T. Chan, and **Ping Sheng**, *Science* 292, 2462-2465 (2001).

28. Locally Resonant Sonic Materials, Z. Liu, X. Zhang, Y. Mao, Y. Y. Zhu, Z. Yang, C. T. Chan, and **Ping Sheng**, *Science* 289, 1734-1736 (2000).

29. Group Velocity in Strongly Scattering Media, J. Page, **Ping Sheng**, H. Schriemer, I. Jones, X. Jing, and D. Weitz, *Science* 271, 634 (1996).

30. Heat Conductivity of Amorphous Solids: Simulation Results on Model Structures, **Ping Sheng** and M. Y. Zhou, *Science* 253, 539 (1991).

Review Articles

1. Breaking the Barriers: Advances in Acoustic Functional Materials, H. Ge, M. Yang, C. Ma, M. H. Lu, Y. F. Chen, N. Fang and **Ping Sheng**, *Natl. Sci. Rev*. 5, 159 (2018).

2. Sound Absorption Structures: From Porous Media to Acoustic Metamaterials, M. Yang and **Ping Sheng**, *Annu. Rev. Mater. Res*. 47, 83–114 (2017).

3. Acoustic Metamaterials: From Local Resonances to Broad Horizons, G. C. Ma and **Ping Sheng**, *Sci. Adv*. 2, e1501595 (2016).

4. Smart Electroresponsive Droplets in Microfludics, J. Wu, W. Wen and **Ping Sheng**, *Soft Matter* 8, 11589-11599 (2012).

5. Electrorheological Fluids: Mechanisms, Dynamics, and Microfluidics Applications, **Ping Sheng** and W. Wen, *Annu. Rev. Fluid Mech.* 44, 143-174 (2012).

6. Superconductivity in 4-Angstrom Carbon Nanotube Arrays--A Short Review, Z. Wang, W. Shi, R. Lortz and **Ping Sheng**, *Nanoscale* 4, 21-41 (2012).

7. Nanoscale Interfacial Phenomena in Complex Fluids, **Ping Sheng**, C. Liu, T. Qian and X. Wang, *Solid State Commun.* 150, 967-1039 (2010).

8. Hydrodynamic Boundary Conditions: An Emergent Behavior of Fluid-Solid Interactions, T. Qian, X. Wang and **Ping Sheng**, *Solid State Commun.* 150, 976-989 (2010).

9. Electrorheology: Statics and Dynamics, **Ping Sheng** and W. Wen, *Solid State Commun.* 150, 1023-1039 (2010).

10. Transformation Optics and Metamaterials, H. Chen, C.T. Chan and **Ping Sheng**, *Nat. Mater*. 9, 387-396 (2010).

11. Electrorheological Fluids: Structures and Mechanisms, W. Wen, X. Huang and **Ping Sheng**, *Soft Matter* 4, 200-210 (2008).

12. Generalizing the Concept of Negative Medium to Acoustic Waves, J. Li, K. H. Fung, Z. Y. Liu, **Ping Sheng** and C. T. Chan, in "Physics of Negative Refraction and Negative Index Materials", edited by C. M. Krowne and Y. Zhang (Springer, Heidelberg, 2007), p. 183-215

13. Tunneling and Dispersion in 3D Phononic Crystals, J. H. Page, S. Yang, Z. Liu, M. Cowan, C. T. Chan and **Ping Sheng**, *Z. Kristallogr.* 220, 859-870 (2005).

14. Classical Wave Localization and Spectral Gap Materials, **Ping Sheng** and C. T. Chan, *Z. Kristallogr.* 220, 757-764 (2005).

15. Dielectric Electrorheological Fluids: Theory and Experiment, H. Ma, W. Wen, W. Y. Tam and **Ping Sheng**, *Adv. in Phys.* 52, 343-383 (2003).

16. Feature Article: Electronic Transport in Granular Metal Films, **Ping Sheng**, *Philos. Mag. B* 65, 357 (1992).

17. Wave Localization and Multiple Scattering in Randomly-Layered Media, **Ping Sheng**, B. White, Z. Q. Zhang, and G. Papanicolaou, in *"Scattering and Localization of Classical Waves in Random Media"*, edited by P. Sheng (World Scientific Publishing Co., Inc. Singapore, 1990), p. 563.

18. Wave Diffusion and Localization in Random Composites, Z. Q. Zhang and **Ping Sheng**, in *"Scattering and Localization of Classical Waves in Random Media"*, edited by P. Sheng (World Scientific Publishing Co., Inc. Singapore, 1990), p. 137.

19. Microstructure and Dielectric Properties of Granular Composite Films - A Review, **Ping Sheng**, *Opt. and Laser Tech*., 253 (1981).

20. Theories of Nematic Liquid Crystals - A Review, **Ping Sheng**, *Progress in Phys*. 1, 154 (1981).

21. Hard Rod Model of the Nematic-Isotropic Phase Transition, **Ping Sheng**, in *"Introduction to Liquid Crystals"*, E. B. Priestley, P. J. Wojtowicz and P. Sheng, edits. (Plenum Press, N. Y. 1976), p. 59.

22. Introduction to the Elastic Continuum Theory of Liquid Crystals, **Ping Sheng**, in *"Introduction to Liquid Crystals"*, E. B. Priestley, P. J. Wojtowicz and P. Sheng, edits. (Plenum Press, N. Y. 1976), p. 103.

23. The Landau-de Gennes Theory of Liquid Crystal Phase Transitions, **Ping Sheng** and E. B. Priestley, in *"Introduction to Liquid Crystals"*, E. B. Priestley, P. J. Wojtowicz and P. Sheng, edits. (Plenum Press, N. Y. 1976), p. 143.

24. Structural and Electrical Properties of Granular Metal Films, B. Abeles, **Ping Sheng**, M. Coutts, and Y. Arie, *Adv. in Phys*. 24, 407 (1975).

Physical Review Articles

1. Electric field-induced Giant Columns of Polarized Water Molecules, C. Dai, M.J. Liao, X.L. Li, S.Y. Chen, P. Gao, **Ping Sheng**, *Phys. Rev. Res.* 4, 033164 (2022).

2. Inertial-Amplified Mechanical Resonators for the Mitigation of Ultralow-Frequency Vibrations, Z. Dong, **Ping Sheng,** *Phys. Rev. Appl.* 18, 014027 (2022).

3. Microwave and Acoustic Absorption Metamaterials, S.C. Qu, **Ping Sheng**, *Phys. Rev. Appl.* 17, 047001 (2022).

4. Manipulation of Low-Frequency Sound with a Tunable Active Metamaterial Panel, N. Gao, Z. Dong , H.Y. Mak, **Ping Sheng**, *Phys. Rev. Appl.* 17, 044037 (2022).

5. Going Beyond the Causal Limit in Acoustic Absorption, H.Y. Mak, X.N. Zhang, Z. Dong, S.

Miura, T. Iwata, **Ping Sheng**, *Phys. Rev. Appl.* 16, 044062 (2021).

6. Quantum Diffusion of Massive Dirac Fermions Induced by Symmetry Breaking, T. Zhang, C.S. Tian, **Ping Sheng**, *Phys. Rev. B* 104, 075427 (2021).

7. Correlation Hard Gap in Antidot Graphene, J. Pan, S.S. Yeh, H.J. Zhang, David G. Rees, T. Zhang, B. Zhang, J.J. Lin, **Ping Sheng**, *Phys. Rev. B* 103, 235114 (2021).

8. Correlation in Thermal Fluctuations Induced by Phase-locked Hydrodynamic Modes, X.H. Deng, X.P. Wang, **Ping Sheng**, Phys. Rev. *E* 103, 053106 (2021).

9. Minimizing Indoor Sound Energy with Tunable Metamaterial Surfaces, S.C. Qu, **Ping Sheng**, *Phys. Rev. Appl*. 14, 034060 (2020).

10. Decomposing Thermal Fluctuations with Hydrodynamic Modes, X. H. Deng, X. Y. Wei, X. P. Wang, **Ping Sheng**, *Phys. Rev. E* 101, 063104 (2020).

11. Berry Curvature and Nonlocal Transport Characteristics of Antidot Graphene, J. Pan, T. Zhang, H. J. Zhang, B. Zhang, Z. Dong and **Ping Sheng**, *Phys. Rev. X* 7, 031043 (2017).

12. Spatial Variation of Charge Carrier Density in Graphene under a Large Bias Current, J. Pan, H. J. Zhang, Y. Zheng, B. Zhang, T. Zhang and **Ping Sheng**, *Phys. Rev. B* 93, 115424 (2016).

13. Determining Hydrodynamic Boundary Conditions from Equilibrium Fluctuations, S. Y. Chen, H. Wang, T. Z. Qian and **Ping Sheng**, *Phys. Rev. E* 92, 043007 (2015).

14. Measurement of Contact-line Dissipation in a Nanometer-thin Soap Film, S. Guo, C. H. Lee, **Ping Sheng** and P. Tong, *Phys. Rev. E* 91, 012404 (2015).

15. Negative Correlation between Charge Carrier Density and Mobility Fluctuations in Graphene, J. M. Lu, J. Pan, S. S. Yeh, H. J. Zhang, Y. Zheng, Q. H. Chen, Z. Wang, B. Zhang, J. J. Lin, **Ping Sheng**, *Phys. Rev. B* 90, 085434 (2014).

16. Phonon Spectrum and Electron-phonon Coupling in Zigzag Graphene Nanoribbons, T. Zhang, R. Heid, K. P. Bohnen, **Ping Sheng** and C. T. Chan, *Phys. Rev. B* 89, 205404 (2014).

17. Self-Consistent Approach to Global Charge Neutrality in Electrokinetics: A Surface Potential Trap Model, L. Wan, S. X. Xu, M. J. Liao, C. Liu and **Ping Sheng**, *Phys. Rev. X* 4, 011042 (2014).

18. Homogenization Scheme for Acoustic Metamaterials, M. Yang, G. C. Ma, Y. Wu, Z. Y. Yang and **Ping Sheng**, *Phys. Rev. B* 89, 064309 (2014).

19. Generalized Onsager Theory of Liquid Crystals**,** X. B. Xiao and **Ping Sheng**, *Phys. Rev. E* 88, 062501 (2013).

20. Soft silicone rubber in phononic structures: Correct elastic moduli, T. Still, M. Oudich, G. K. Auerhammer, D. Vlassopoulos, B. Djafari-Rouhani, G. Fytas and **Ping Sheng**, *Phys. Rev. B* 88, 094102 (2013).

21. Ultrasonic wave transport in a system of disordered resonant scatterers: Propagating resonant modes and hybridization gaps, M. L. Cowan, J. Page and **Ping Sheng**, *Phys. Rev. B* 84, 094305 (2011).

22. Crossover from Peierls distortion to one-dimensional superconductivity in arrays of (5,0)

carbon nanotubes, T. Zhang, M. Sun, Z. Wang, W Shi and **Ping Sheng**, *Phys. Rev. B* 84, 245449 (2011).

23. Electron localization in metal-decorated graphene, W. Li, Y. He, L. Wang, G. Ding, Z. Zhang, R. Lortz, **Ping Sheng** and N. Wang, *Phys. Rev. B* 84, 045431 (2011).

24. Maximum efficiency of the electro-osmotic pump, Z. Xu, J. Miao, N. Wang, W. Wen and **Ping Sheng**, *Phys. Rev. E* 83, 066303 (2011).

25. Observation of the Meissner state in superconducting arrays of 4- Å carbon nanotubes, C. Ieong, Z. Wang, W. Shi, Y. Wang, N. Wang, Z. Tang, **Ping Sheng** and R. Lortz, *Phys. Rev. B* 83, 184512 (2011).

26. Acoustic Analog of Electromagnetically Induced Transparency in Periodic Arrays of Square Rods, F. Liu, M. Ke, A. Zhang, W. Wen, J. Shi, Z. Liu and **Ping Sheng**, *Phys. Rev. E* 82, 026601 (2010).

27. Superconducting Resistive Transition in Coupled Arrays of 4 Å Carbon Nanotubes, Z. Wang, W. Shi, H. Xie, T. Zhang, N. Wang, Z. Tang, X. Zhang, R. Lortz, **Ping Sheng**, I. Sheikin and A. Demuer, *Phys. Rev. B* 81, 174530 (2010).

28. Development of an Atomic-force-microscope-based Hanging-fiber Rheometer for Interfacial Microrheology, X. Xiong, S. Guo, Z. Xu, P. Tong and **Ping Sheng**, *Phys. Rev. E* 80, 061604 (2009).

29. Localized and Delocalized Surface-plasmon-mediated Light Tunneling Through Monolayer Hexagonal-close-packed Metallic Nanoshells, C. Tang, Z. Wang, W. Zhang, S. Zhu, N. Ming, G. Sun and **Ping Sheng**, *Phys. Rev. B* 80, 165401 (2009).

30. Fluctuation-induced Tunneling Conduction Through Nanoconstrictions, X. Hang, and **Ping Sheng**, *Phys. Rev. B* 79, 165419 (2009).

31. Quantum Interference Hall Effect in Nanopatterned Two-dimensional Electron Gas Systems, X. Hang, and **Ping Sheng**, *Phys. Rev. B* 79, 165307 (2009).

32. Manipulations of Microfluidic Droplets Using Electrorheological Carrier Fluid, M. Zhang, J. Wu, X. Niu, W. Wen, and **Ping Sheng**, *Phys. Rev. E* 78, 066305 (2008).

33. Generalized Nematohydrodynamic Boundary Conditions with Application to Bistable Twisted Nematic Liquid-crystal Displays, A. Fang, T. Qian, and **Ping Sheng**, *Phys. Rev. E* 78, 061703 (2008).

34. Conductance Spectra of Metallic Carbon Nanotube Bundles from First Principles, W. Ren, C. T. Chan, T. H. Cho, T. C. Leung, J. Wang, H. Guo, and **Ping Sheng**, *Phys. Rev. B* 78, 195404 (2008).

35. Three-dimensional Metallic Fractals and Their Photonic Crystal Characteristics, B. Hou, X. Hang, W. Wen, and **Ping Sheng**, *Phys. Rev. B* 77, 125113 (2008).

36. Terahertz Electric Response of Fractal Metamaterial Structures, F. Miyamaru, Y. Saito, M. W. Takeda, B. Hou, L. Liu, W. Wen, and **Ping Sheng**, *Phys. Rev. B* 77, 045124 (2008).

37. Effective Dynamic Mass Density of Composites, J. Mei, Z. Liu, W. Wen, and **Ping Sheng**, *Phys. Rev. B* 76, 134205 (2007).

38. Tuning Fabry-Perot Resonances via Diffraction Evanescent Waves, B. Hou, J. Mei, M. Ke, W. Wen, Z. Liu, J. Shi, and **Ping Sheng**, *Phys. Rev. B* 76, 054303 (2007).

39. Meissner Effect in a System of Coupled One-Dimensional Superconducting Wires: Monte Carlo Simulations, C. Qiu, T, Qian and **Ping Sheng**, *Phys. Rev. B* 75, 024504 (2007).

40. Static Shear Modulus of Electrorheological Fluids, L Shi, W.Y. Tam, X. Huang, and **Ping Sheng**, *Phys. Rev. E* 73, 51501 (2006).

41. Liquid Crystal Pretilt Control by Inhomogeneous Surfaces, J. T. K. Wan, O. K. C. Tsui, H. S. Kwok and **Ping Sheng**, *Phys. Rev. E* 72 , 021711 (2005).

42. Photonic Band Gap Effect and Structural Color from Silver Nanoparticle Gelatin Emulsion, M. H. Kok, R. Ma, J. C. W. Lee, W. Y. Tam, C. T. Chan, K. W. Cheah, and **Ping Sheng**, *Phys. Rev. E* 72, 047601 (2005).

43. Negative-refraction Imaging with Two-dimensional Phononic Crystals, M. Ke, Z. Liu, C. Qiu, W. Wang, J. Shi, W. Wen, and **Ping Sheng**, *Phys. Rev. B* 72 **,** 064306 (2005).

44. Hydrodynamic Slip Boundary Condition at Chemically Patterned Surfaces: A Continuum Deduction from Molecular Dynamics, T. Qian, X. P. Wang and **Ping Sheng**, *Phys. Rev. E* 72, 022501 (2005).

45. Resonant Transmission of Microwaves through Subwavelength Fractal Slits in a Metallic Plate, W. Wen, L. Zhou, B. Hou, C. T. Chan and **Ping Sheng**, *Phys. Rev. B* 72, 153406 (2005).

46. Structural Transition in Bidispersed Electrorheological Fluids, X. Huang, W. Y. Tam and **Ping Sheng**, *Phys. Rev. E* 72, Rapid Communications, 020501 (2005).

47. Photonic Clusters Formed by Dielectric Microspheres: Numerical simulations, J. Ng, Z. F. Lin, C. T. Chan and **Ping Sheng**, *Phys. Rev. B* 72, 085130 (2005).

48. Current Dissipation in Thin Superconducting Wires: A Numerical Evaluation using the String Method, T. Qian, W. Ren and **Ping Sheng**, *Phys. Rev. B* 72, 014512 (2005).

49. Resonance-Enhanced Optical Annealing of Silicon Nanowires, G. H. Ding, C.T. Chan, Z.Q. Zhang and **Ping Sheng**, *Phys. Rev. B* 71, 205302 (2005).

50. Analytic Model of Phononic Crystals with Local Resonances, Z. Liu, C. T. Chan and **Ping Sheng**, *Phys. Rev. B* 71, 014103 (2005).

51. First-Order Liquid Crystal Orientation Transition on Inhomogeneous Substrates, O. K. C. Tsui, F. K. Lee, B. Zhang and **Ping Sheng**, *Phys. Rev. E* 69, 021704 (2004).

52. Anisotropy and Oblique Total Transmission at a Planar Negative-index Interface, L. Zhou, C. T. Chan and **Ping Sheng**, *Phys. Rev. B* 68, 115424 (2003).

53. Molecular Scale Contact Line Hydrodynamics of Immiscible Flows, T. Qian, X. P. Wang and **Ping Sheng**, *Phys. Rev. E* 68, 016306 (2003).

54. Shear-enhanced Yield Stress in Electrorheological Fluids, K. C. Lau, L. Shi, W. Y. Tam and **Ping Sheng**, *Phys. Rev. E* 67, 052502 (2003).

55. Optical Measurement of Azimuthal Anchoring Strength in Nematic Liquid Crystals, B. Zhang, **Ping Sheng** and H. S. Kwok, *Phys. Rev. E* 67, 041713 (2003).

56. Optical Properties of Inverted Opal Photonic Band Gap Crystals with Stacking Disorder, Z. L. Wang, C. T. Chan, W. Y. Zhang, Z. Chen, N. B. Ming and **Ping Sheng**, *Phys. Rev. E* 67, 016612 (2003).

57. Quantum Interference and the Giant Hall Effect in Percolating Systems, C. Wan and **Ping Sheng**, *Phys. Rev. B* 66, 075309 (2002).

58. Three-component Elastic Wave Band-gap Material, Z. Liu, C. T. Chan and **Ping Sheng**, *Phys. Rev. B* 65, 165116 (2002).

59. Reply to "Comment on 'Ward Identities for Transport of Classical Waves in Disordered Media'", H. T. Nieh, L. Chen and **Ping Sheng**, *Phys. Rev. E* 64, 18602 (2001).

60. Three-dimensional Self-assembly of Metal Nanoparticles: Possible Photonic Crystal with a Complete Gap below the Plasma Frequency, Z. Wang, C. T. Chan, W. Zhang, N. Ming and **Ping Sheng**, *Phys. Rev. B* 64, 113108 (2001).

61. Elastic Wave Scattering by Periodic Structures of Spherical Objects: Theory and Experiment, Z. Liu, C. T. Chan, **Ping Sheng**, A. L. Goertzen and J. H. Page, *Phys. Rev. B* 62, 2446 (2000).

62. Dielectric-constant Evaluation from Microstructures, H. Ma, B. Zhang, W. Y. Tam, and **Ping Sheng**, *Phys. Rev. B* 61, 962 (2000).

63. Wave Transport in Random Media: The Ballistic to Diffusive Transition, Z. Q. Zhang, I. P. Jones, H. P. Schriemer, J. H. Page, D. A. Weitz, and **Ping Sheng**, *Phys. Rev. E* 60, 4843 (1999).

64. Generalized Hydrodynamic Equations for Nematic Liquid Crystals, T. Qian and **Ping Sheng**, *Phys. Rev. E* 58, 7475 (1998).

65. Group Velocity of Acoustic Waves in Strongly Scattering Media: Dependence on the Volume Fraction of Scatterers, M. L. Cowan, K. Beaty, J. H. Page, Z. Liu, and **Ping Sheng**, *Phys. Rev. E* 58, 6626 (1998).

66. Ward Identities for Transport of Classical Waves in Disordered Media, H. T. Nieh, Liu Chen, and **Ping Sheng**, *Phys. Rev. E* 57, 1145 (1998).

67. Optical Nonlinearity Enhancement via Geometric Anisotropy, K. P. Yuen, M. F. Law, K. W. Yu and **Ping Sheng**, *Phys. Rev. E* 56, Rapid Communications, R1322 (1997).

68. Orientational States and Phase Transitions Induced by Microtextured Substrates, T. Z. Qian and **Ping Sheng**, *Phys. Rev. E* 55, 7111 (1997).

69. Frequency and Water Content Dependencies of Electrorheological Properties, W. Wen, H. Ma, W. Y. Tam and **Ping Sheng**, *Phys. Rev. E* 55, R1294 (1997).

70. Electron Weak Localization in Disordered Films, Tan Li and **Ping Sheng**, *Phys. Rev. B* 53 *Rapid Communications*, R13268 (1996).

71. Quantum Transport in Porous Media: Inelastic Scattering of ^{4}He Atoms and Its Temperature Dependence, Z. Q. Zhang and **Ping Sheng**, *Phys. Rev. E* 49, 3050 (1994).

72. HWave Localization in Random NetworksH, Z. Q. Zhang and **Ping Sheng**, *Phys. Rev. B* 49, 83 (1994).

73. Quantum Brownian Motion on a Lattice, **Ping Sheng** and Z. Q. Zhang, *Phys. Rev. B* 48, 12609 (1993).

74. Sound Propagation in Suspensions of Solid Spheres, L. Ye, J. Liu, **Ping Sheng** and D. Weitz, *Phys. Rev. E* 48, 2805 (1993).

75. Acoustic and Electromagnetic Quasi-Modes in Dispersed Random Media, X. Jing, **Ping Sheng** and M. Zhou, *Phys. Rev. A* 46, 6513 (1992).

76. Disordered Surface Layer Transition in Nematic Liquid Crystals, **Ping Sheng**, B. Z. Li, M. Y. Zhou, T. Moses, and Y. R. Shen, *Phys. Rev. A* 46, 946 (1992).

77. Immiscible Fluids Displacement: Contact Line Dynamics and the Velocity-Dependent Capillary Pressure, M. Zhou and **Ping Sheng**, *Phys. Rev. A* 45, 5694 (1992).

78. Sound Propagation in sodium di-2-ethyl-hexylsulfosuccinate Micelles and Microemulsions, L. Ye, D. A. Weitz, **Ping Sheng** and J. S. Huang, *Phys. Rev. A* 44, 8249 (1991).

79. Lattice Softening in Nanometer-size Iron Particles, J. R. Childress, C. L. Chien, M. Y. Zhou and **Ping Sheng**, *Phys. Rev. B* 44, 11689 (1991).

80. Quantum Percolation Model of Electronic Transport in 2-D Granular Metal Films, Z. Q. Zhang and **Ping Sheng**, *Phys. Rev. B* 44, 3304 (1991).

81. Local Fields in Random Dielectrics: Distribution Characteristics and the Effects of Microstructure, Z. Chen and **Ping Sheng**, *Phys. Rev. B* 43, 5735 (1991).

82. Lattice Softening and Melting Characteristics of Granular Particles, Minyao Zhou and **Ping Sheng**, *Phys. Rev. B* 43, 3460 (1991).

83. Anderson Localization in Anisotropic Random Media, Z. Q. Zhang, Q. J. Chu, W. Xue and **Ping Sheng**, *Phys. Rev. B* 42, 4613 (1990).

84. Effective Medium Theory of Sedimentary Rocks, **Ping Sheng**, *Phys. Rev. B* 4l, 4507 (1990).

85. First-Principle Fourier Approach for the Calculation of Effective Dielectric Constant of Periodic Composites, R. Tao, Z. Chen and **Ping Sheng**, *Phys. Rev. B* 4l, 2417 (1990).

86. First-Principle Calculations of Dynamic Permeability in Porous Media, M. Y. Zhou and **Ping Sheng**, *Phys. Rev. B* 39, 12027 (1989).

87. Optical Effects of Multipole Interaction in Aggregated Structures: Rigorous Scattering Solution for a Periodic Chain of Cylinders, Z. Chen and **Ping Sheng**, *Phys. Rev. B* 39, 9816 (1989).

88. Optical Properties of Aggregate Clusters, Z. Chen, **Ping Sheng**, D. A. Weitz, H. M. Lindsay, M. Y. Lin, and P. Meakin, *Phys. Rev. B* 37, 5232 (1988).

89. Minimum Wave Localization Length in a One-Dimensional Random Medium, **Ping Sheng**, B. White, Z. Q. Zhang and G. Papanicolaou, *Phys. Rev. B* 34, 4757 (1986).

90. Elastic Jellium Sphere in a Static Electric Field, **Ping Sheng**, M. Y. Chou and M. L. Cohen, *Phys. Rev. B* 34, 732 (1986).

91. First-Principles Approach for Effective Elastic-Moduli Calculation: Application to Continuous Fractal Structure, **Ping Sheng** and R. Tao, *Phys. Rev. B* 31, 6131 (1985).

92. Phonon Absorption of Far-Infrared Radiation in Small-Metal-Particle Systems, **Ping Sheng**, *Phys. Rev. B* 31, 4906 (1985).

93. Anisotropic Steric Effects and Negative <P_4> in Nematic Liquid Crystals, K. Feng, C. W. Woo and **Ping Sheng,** *Phys. Rev. A* 28, 1587 (1983).

94. Hopping Conductivity in Granular Disordered Systems, **Ping Sheng** and J. Klafter, *Phys. Rev. B* 27, 2583 (1983).

95. Exact Eigenfunctions for Square-Wave Gratings: Application to Diffraction and Surface Plasmon Calculations, **Ping Sheng**, R. S. Stepleman and P. Sanda, *Phys. Rev. B* 26, 2907 (1982).

96. Boundary-Layer Phase Transition in Nematic Liquid Crystals, **Ping Sheng**, *Phys. Rev. A* 26, 1610 (1982).

97. Geometric Effects in Continuous Media Percolation, **Ping Sheng** and R. V. Kohn, *Phys. Rev. B* 26, 1331 (1982).

98. Observation of Fluctuation-Modulation of Tunnel Junctions by Applied A. C. Stress in Carbon-Polyvinylchloride Composites, E. K. Sichel, **Ping Sheng**, J. I. Gittleman, and S. Bozowski, *Phys. Rev. B* 24, 6131 (1981).

99. Pair-Cluster Theory for the Dielectric Constant of Composite Media, **Ping Sheng**, *Phys. Rev. B* 22, 6364 (1980).

100. Fluctuation-Induced Tunneling Conduction in Disordered Materials, **Ping Sheng**, *Phys. Rev. B* 2l, 2180 (1980).

101. Transport Properties of the Composite Material Carbon-Polyvinylchloride, E. K. Sichel, J. Gittleman and **Ping Sheng,** *Phys. Rev. B* 18, 5712 (1978).

102. Constant Coupling Theory of Nematic Liquid Crystals, **Ping Sheng** and P. J. Wojtowicz, *Phys. Rev. A* 14, 1883 (1976).

103. Measurement of a Critical Exponent by a New Zero-Field Transmission Resonance Technique, C. N. Manicoupolous, **Ping Sheng** and T. R. Carver, *Phys. Rev. B* 8, 1131 (1973).

104. Intermediate Coupling Theory: Pade Approximants for Polarons, **Ping Sheng** and J. D. Dow, *Phys. Rev. B* 4, 1343 (1971).

Applied Physics Letters

1. Acoustic Metamaterial Absorbers: The Path to Commercialization, M. Yang and **Ping Sheng**, *Appl. Phys. Lett*. 122, 260504 (2023).

2. Subwavelength Total Acoustic Absorption with Degenerate Resonators, M. Yang, C. Meng, C. X. Fu, Y. Li, Z. Y. Yang and **Ping Sheng**, *Appl. Phys. Lett*. 107, 104104 (2015).

3. Active Control of Membrane-type Acoustic Metamaterial by Electric Field, S. W. Xiao, G. C. Ma, Y. Li, Z. Y. Yang and **Ping Sheng**, *Appl. Phys. Lett.* 106, 091904 (2015).

4. Low-Frequency Narrow-Band Acoustic Filter with Large Orifice, G. C. Ma, M. Yang, Z. Y. Yang and **Ping Sheng**, *Appl. Phys. Lett.* 103, 011903 (2013).

5. Fano Effect of Metamaterial Resonance in Terahertz Extraordinary Transmission, X. Xiao, J. Wu, F. Miyamaru, M. Zhang, S. Li, M. W. Takeda, W. Wen and **Ping Sheng**, *Appl. Phys. Lett.* 98, 011911 (2011).

6. Acoustic Metamaterial Panels for Sound Attenuation in the 50–1000 Hz Regime**,** Z. Yang, H. M. Dai, N. H. Chan, G. C. Ma and **Ping Sheng**, *Appl. Phys. Lett.* 96, 041906 (2010).

7. Emission of Terahertz Radiations from Fractal Antennas, F. Miyamaru, Y. Saito, M. W. Takeda, L. Liu, B. Hou, W. Wen and **Ping Sheng**, *Appl. Phys. Lett.* 95, 221111 (2009).

8. Acoustic Wave Transmission Through a Bull's Eye Structure, J. Mei, B. Hou, M. Ke, S. Peng, H. Jia, Z. Liu, J. Shi, W. Wen and **Ping Sheng**, *Appl. Phys. Lett.* 92, 124106 (2008).

9. Magnetically Responsive Elastic Microspheres, S. Peng, M. Zhang, X. Niu, W. Wen, Z. Liu, J Shi and **Ping Sheng**, *Appl. Phys. Lett.* 92, 012108 (2008).

10. Micro Thermoindicators and Optical-Electronic Temperature Control for Microfluidic Applications, L. Liu, S. Peng, W. Wen and **Ping Sheng**, *Appl. Phys. Lett.* 91, 093513 (2007).

11. Paperlike Thermochromic Display, L. Liu, S. Peng, W. Wen and **Ping Sheng,** *Appl. Phys. Lett*. 90, 213508-213510 (2007).

12. Microwave Transmission Through Metallic Hole Arrays: Surface Electric Field Measurements, B. Hou, Z. H. Hang, W. Wen, C. T. Chan, and **Ping Sheng,** *Appl. Phys. Lett*. 89, 131917-131919 (2006).

13. Electrorheological Fluid-Actuated Microfluidic Pump, L. Liu, X. Chen, X. Niu, W. Wen and **Ping Sheng,** *Appl. Phys. Lett*. 89, 083505-083507 (2006).

14. Substrate Patterning for Liquid Crystal Alignment by Optical Interference, X. Lu, F. K. Lee, H. S. Kwok, V. Chigrinov, O. K. C. Tsui, and **Ping Sheng**, *Appl. Phys. Lett.* 88, 243508 (2006).

15. Electrorheological Fluid-Actuated Flexible Platform, L. Liu, X. Niu, W. Wen and **Ping Sheng,** *Appl. Phys. Lett*. 88, 173505-173507 (2006).

16. Active Microfluidic Mixer Chip, X. Niu, L. Liu, W. Wen and **Ping Sheng,** *Appl. Phys. Lett*. 88, 153508-153510 (2006).

17. Realization of Optical Periodic Quasicrystals Using Holographic Lithography, X. Wang, J. Xu, J. C. W. Lee, Y. K. Pang, W. Y. Tam, C. T. Chan, and **Ping Sheng**, *Appl. Phys. Lett.* 88, 051901 (2006).

18. Variable Liquid Crystal Pretilt Angles by Nanostructured Surfaces, F. S. Yeung, J. Y. Ho, Y. W. Li, F. C. Xie, O. K. Tsui, H. S. Kwok, and **Ping Sheng**, *Appl. Phys. Lett.* 88, 051910 (2006).

19. Parallel-field Electrorheological Clutch: Enhanced High Shear Rate Performance, L. Liu, X. Huang, C. Shen, Z. Liu, J. Shi, W. Wen and **Ping Sheng**, *Appl. Phys. Lett.* 87, 104106 (2005).

20. Erratum: Continuous liquid crystal pretilt control through textured substrates [Appl. Phys. Lett. 85, 5556 (2004), F. K. Lee, B. Zhang, Ping Sheng, H. S. Kwok and O. K. C. Tsui, *Appl. Phys. Lett*. 86, 149903 (2005).

21. Continuous Liquid Crystal Pretilt Control Through Textured Substrates, F. K. Lee, B. Zhang, **Ping Sheng**, H. S. Kwok and O. K. C. Tsui, *Appl. Phys. Lett*. 85, 5556-5558 (2004).

22. Synthesis of 4Å Single-walled Carbon Nanotubes in Catalytic Si-substituted $AlPO_4$-5 Molecular Sieves, Z. M. Li, J. P. Zhai, H. J. Liu, I. L. Li, C. T. Chan, **Ping Sheng** and Z. K. Tang, *Appl. Phys. Lett*. 85, 1253-1255 (2004).

23. Particle Size Scaling of the Giant Electrorheological Effect, W. Wen, X. Huang and **Ping Sheng,** *Appl. Phys. Lett*. 85, 299-301 (2004).

24. Broadband Locally Resonant Sonic Shields, K. M. Ho, C. K. Cheng, Z. Yang, X. X. Zhang and **Ping Sheng,** *Appl. Phys. Lett*. 83, 5566-5568 (2003).

25. Multiband Subwavelength Magnetic Reflectors based on Fractals, L. Zhou, W. Wen, C. T. Chan and **Ping Sheng,** *Appl. Phys. Lett*. 83, 3257-3259 (2003).

26. Infrared Passbands from Fractal Slit Patterns on a Metal Plate, W. Wen, Z. Yang, G. Xu, Y. Chen, L. Zhou, W. Ge, C. T. Chan and **Ping Sheng,** *Appl. Phys. Lett*. 83, 2106-2108 (2003).

27. Reflectivity of Planar Metallic Fractal Patterns, L. Zhou, W. Wen, C. T. Chan and **Ping Sheng,** *Appl. Phys. Lett*. 82, 1012-1014 (2003).

28. Frequency-induced Structure Variation in Electrorheological Fluids, W. Wen, H. Ma, W. Y. Tam and **Ping Sheng,** *Appl. Phys. Lett*. 77, 3821-3823 (2000).

29. Single-electron Tunneling Study of Two-dimensional Gold Clusters, B. Wang, X. Xiao, X. Huang, **Ping Sheng** and J. G. Hou, *Appl. Phys. Lett*. 77, 1179-1181 (2000).

30. Anisotropic Dielectric Properties of Structured Electrorheological Fluids, W. Wen, H. Ma, W. Y. Tam and **Ping Sheng,** *Appl. Phys. Lett*. 73, 3070-3072 (1998).

31. Magnetic Materials-based Electrorheological Fluids, W. Wen, N. Wang, W. Y. Tam, and **Ping Sheng**, *Appl. Phys. Lett*. 71, 2529-2531 (1997).

32. Dynamic Flow and Switching Bistability in Twisted Nematic Liquid Crystal Cells, T. Z. Qian, Z. L. Xie, H. S. Kwok and **Ping Sheng**, *Appl. Phys. Lett*. 71, 596-598 (1997).

33. Large Third-Order Optical Nonlinearity in Au:SiO_2 Composite Films Near the Percolation Threshold, H. B. Liao, R. F. Xiao, J. S. Fu, P. Yu, and G. K. L. Wong and **Ping Sheng**, *Appl. Phys. Lett.* 70, 1 (1997).

34. Differential Effective Medium Theory of Sedimentary Rocks, **Ping Sheng** and A. J. Callegari, *Appl. Phys. Lett*. 44, 738 (1984).

35. Wavelength-Selective Absorption Enhancement in Thin-Film Solar Cells, **Ping Sheng**, A. N. Bloch and R. S. Stepleman *Appl. Phys. Lett*. 43, 579 (1983).

Other Journals

1. Zero-Frequency Bandgap Metamaterials: The Mosaic Design Strategy, N. Gao, V. Romero-García, J.-P. Groby, and **Ping Sheng**, *Adv. Funct. Mater*. 2025, e08243 (2025).

2. Acoustic Metamaterials: Outlook for the Future, **Ping Sheng**, *Chin. Sci. Bulletin* 70, 1699-1701 (2025).

3. Evolution of Channel Flow and Darcy's Law beyond the Critical Reynolds Number, X. H. Deng and **Ping Sheng**, *Eur. Phys. J. E* 46, 37 (2023).

4. Theoretical and Experimental Investigation of the Metal–insulator Transition in Disordered Anti-dot graphene, T. Zhang, H. J. Zhang, J. Pan and **Ping Sheng**, *New J. Phys.* 24, 113027 (2022).

5. Fundamental Constraints on Broadband Passive Acoustic Treatments in Unidimensional Scattering Problems, Y. Meng, V. Romero-García1, G. Gabard, J.-P. Groby, C. Bricault, S. Goudé and **Ping Sheng**, *Proc. R. Soc. A* 478, 20220287 (2022).

6. A Focus on Interfaces, **Ping Sheng**, *Engineering* 7, 552 (2021).

7. Acoustic Metamaterials, J. Li, X.H. Wen and **Ping Sheng**, *J. Appl. Phys.* 129, 171103 (2021).

8. A Focus on Two Electrokinetics Issues, C. Dai and **Ping Sheng**, *Micromachines* 11, 1028 (2020).

9. Peierls-type Metal-insulator Transition in Carbon Nanostructures, B. Zhang, T. Zhang, J. Pan, T. P. Chow, A. M. Aboalsaud, Z. P. Lai and **Ping Sheng**, *Carbon* 172, 106-111 (2020).

10. Non-Stokes Drag Coefficient in Single-particle Electrophoresis: New Insights on a Classical Problem, M. J. Liao, M. T. Wei, S. X. Xu, H. D. Ou-Yang and **Ping Sheng**, *Chin. Phys. B*, 28(8), 084701 (2019).

11. Giant Enhancement of Superconductivity in Arrays of Ultrathin Gallium and Zinc Sub-nanowires Embedded in Zeolite, B. Zhang, J. Lyu, A. Rajan, X. Li, X. Zhang, T. Zhang, Z. Dong, J. Pan, Y. Liu, J. Zhang, R. Lortz, Z. Lai and **Ping Sheng**, *Mater. Today Phys*. 6, 38-44 (2018).

12. An Integration Strategy for Acoustic Metamaterials to Achieve Absorption by Design, M. Yang and **Ping Sheng**, *Appl. Sci*., 8, 1247 (2018).

13. Optimal Sound Absorbing Structures, M. Yang, S. Y. Chen, C. X. Fu and **Ping Sheng**, *Proc. Mtgs. Acoust. 3*2, 045018 (2018).

14. A Critical Path Approach for Elucidating the Temperature Dependence of Granular Hopping Conduction, T. C. Wu, J. J. Lin and **Ping Sheng**, *Front. Phys*., 13(5), 137205 (2018).

15. Perspective: Acoustic Metamaterials in Transition, Y. Wu, M. Yang and **Ping Sheng**, *J. Appl. Phys*., 123, 090901 (2018).

16. Optical Sound Absorbing Structures, M. Yang, S. Y. Chen, C. X. Fu and **Ping Sheng**, *Proc. Mtgs. Acoust*., 32, 045018 (2017).

17. Optimal Sound-absorbing Structures, M. Yang, S. Y. Chen, C. X. Fu and **Ping Sheng**, *Mater. Horiz.*, 4, 673-680 (2017).

18. Regulating Top-Surface Multilayer/Single-Crystal Graphene Growth by "Gettering" Carbon Diffusion at Backside of the Copper Foil, Irfan H. Abidi, Y. Y. Liu, J. Pan, A. Tyagi, M. H. Zhuang, Q. C. Zhang, Aldrine A. Cagang, L. T. Weng, **Ping Sheng**, William A. Goddard III and Z. T. Luo, *Adv. Funct. Mater., 1700121* (2017).

19. Observation of High T_c One Dimensional Superconductivity in 4 Angstrom Carbon Nanotube

Arrays, B. Zhang, Y. Liu, Q. H. Chen, Z. P. Lai and **Ping Sheng**, *AIP Adv.* 7, 025305 (2017).

20. Fabrication and Molecular Transport Studies of Highly c-Oriented AFI Membranes, Y. Liu, B. Zhang, D. F. Liu, **Ping Sheng**, Z. P. Lai, *J. Membr. Sci*., 528, 46 (2017).

21. Membrane-type Resonator as an Effective Miniaturized Tuned Vibration Mass Damper, L. Sun, K. Y. Au-Yeung, M. Yang, S. T. Tang, Z. Y. Yang and **Ping Sheng**, *AIP Adv.* 6, 085212 (2016).

22. The Poisson Boltzmann Equation and the Charge Separation Phenomenon at the Silica-water Interface: A Holistic Approach, M. J. Liao, L. Wan, S. X. Xu, C. Liu and **Ping Sheng**, *Annals of Mathematical Sciences and Applications*, 1, 217-249 (2016).

23. Subwavelength Perfect Acoustic Absorption in Membrane-type Metamaterials: A Geometric Perspective, M. Yang, G. C. Ma, Z. Y. Yang and **Ping Sheng**, *EPJ Appl. Metamat*., 2, 10 (2015).

24. Sound Absorption by Subwavelength Membrane Structures: A Geometric Perspective, M. Yang, Y. Li, C. Meng, C. X. Fu, J. Mei, Z. Y. Yang, **Ping Sheng**, *C. R. Mecanique*, 343, 635-644 (2015).

25. Controlled Removal of Monolayers for Bilayer Graphene Preparation and Visualization, L. Gan, H. J. Zhang, R. Z. Wu, Y. Ding, **Ping Sheng** and Z. T. Luo, *R. Soc. Chem. Adv.*, 5, 25471-25476 (2015).

26. Grain Size Control in the Fabrication of Large Single-crystal Bilayer Graphene Structures, L. Gan, H. J. Zhang, R. Z. Wu, Q. C. Zhang, X. W. Ou, Y. Ding, **Ping Sheng** and Z. T. Luo, *Nanoscale* 7, 2391 (2015).

27. Electric-field-induced Forces between Two Surfaces Filled with an Insulating Liquid: the Role of Adsorbed Water, Y. J. Wang, Z. L. Xu, **Ping Sheng** and P. Tong, *Eur. Phys. J. Appl. Phys*., 66, 31301 (2014).

28. New Developments in the Growth of 4 Angstrom Carbon Nanotubes in Linear Channels of Zeolite Template, Q.H. Chen, Z. Wang, Y. Zheng, W. Shi, D. D. Wang, Y. C. Luo, B. Zhang, J. M. Lu, H. J. Zhang, J. Pan, C. Y. Mou, Z. K. Tang and **Ping Sheng**, *Carbon* , 76, 401-409 (2014).

29. A Step Towards a Seismic Cloak, **Ping Sheng**, *Physics*, 7, 34 (2014).

30. An Energetic Variational Approach for Ion Transport, S. X. Xu, **Ping Sheng** and C. Liu, *Commun. Math. Sci.*, 12, 779-789 (2014).

31. Superconducting versus Semiconducting Electronic Ground State in Chirality-specific Double-wall Carbon Nanotube, Z. Ting and **Ping Sheng**, *New J. Phys*. 15, 083201 (2013).

32. Dimensional Crossover Transition in a System of Weakly Coupled Superconducting Nanowires, M. Y. Sun, Z. L. Hou, T. Zhang, Z. Wang, W. Shi, R. Lortz and **Ping Sheng**, *New J. Phys*. 14, 103018 (2012).

33. Fabrication of iron oxide/silica core-shell nanoparticles and their magnetic characteristics, F. Jiang, Y. Fu, Y. Zhu, Z. K. Tang and **Ping Sheng**, *J. Alloys Compd*. 543, 43-48 (2012).

34. Anisotropic dynamic mass density for fluid-solid composites, Y. Wu, J. Mei and **Ping Sheng**, *Physica B*, 407, 4093-4096 (2012).

35. Single-phase electrorheological effect in microgravity, G. Zhao, S. Chen, W. Wen, F. Miyamaru, M. W. Takeda, J. Yu and **Ping Sheng**, *Soft Matter*, 7, 7198-7200 (2011).

36. Graphene Magnetoresistance Device in van der Pauw Geometry, J. Lu, H. Zhang, W. Shi, Z. Wang, Y. Zheng, T. Zhang, N. Wang, Z. Tang and **Ping Sheng**, *Nano Lett.*, 11, (7), 2973-2977 (2011).

37. Facile fabrication, properties and application of novel thermo-responsive hydrogel, J. Li, X. Gong, X. Yi, **Ping Sheng** and W. Wen, *Smart Mater. Struct.* 20, 075005 (2011).

38. Design and fabrication of microfluidic mixer from carbonyl iron-PDMS composite membrane, J. Li, M. Zhang, L. Wang, **Ping Sheng** and W. Wen, *Microfluidics & Nanofluidics*, 10, 919-925 (2011)

39. Digital flow control of electroosmotic pump: Onsager coefficients and interfacial parameters determination, Z. Xu, J. Miao, N. Wang, W. Wen and **Ping Sheng**, *Solid State Commun*. 151, 440-445 (2011).

40. 1D goes 2D: A Berezinskii-Kosterlitz-Thouless transition in superconducting arrays of 4-Angstrom carbon nanotubes, Z. Wang, W. Shi, H. Xie, T. Zhang, N. Wang, Z.K. Tang, X. Zhang, R. Lortz and **Ping Sheng**, *Phys. Status Solidi B* 247, Nos. 11-12, 2968-2973 (2010).

41. Resonant Terahertz Transmissions through Metal Hole Array on Silicon Substrate, X. Xiao, J. Wu, Y. Sasagawa, F. Miyamaru, M. Zhang, M. W. Takeda, C. Qiu, W. J. Wen and **Ping Sheng**, *Opt. Express* 18 (18), 18558-18564 (2010).

42. Subwavelength Waveguiding and Imaging with a One-dimensional Array of Metallic H-fractals, X. Xiao, X. Yi, B. Hou, W. J. Wen, Z. Liu, J. Shi and **Ping Sheng**, *New J. Phys.* 12, 073021 (2010).

43. Droplet Spreading Driven by van der Waals Force: a Molecular Dynamics Study, C. Wu, T. Qian and **Ping Sheng**, *J. Phys. Condens. Matter* 22, 325101 (2010).

44. Characteristics of Terahertz Radiation Emitted From Fractal Photoconductive Antennas, F. Miyamaru, Y. Saito, M. W. Takeda, B. Hou, W. J. Wen and **Ping Sheng**, *Jpn. J. Appl. Phys.*, 49, 070205 (2010).

45. Giant Electrorheological Fluid Comprising Nanoparticles: Carbon Nanotube Composite, J. X. Li, X. Q. Gong, S. Y. Chen, W. J. Wen and **Ping Sheng**, *J. Appl. Phys.* 107, 093507 (2010).

46. Modeling and simulations for molecular scale hydrodynamics of the moving contact line in immiscible two-phase flows, T. Qian, C. Wu, S.L. Lei, X. Wang and **Ping Sheng**, *J. Phys Condens Matter*, 21, 464119 (2009).

47. Tuning birefringence by using two-dimensional photonic band structure, X. Xiao, B. Hou, W. Wen and **Ping Sheng**, *J. Appl. Phys*. 106 , 086103 (2009).

48. Negative Compressibility of Selenium Chains Confined in the Channels of $AlPO_4$-5 Single Crystals, W. Ren, J.T. Ye, W. Shi, Z.K. Tang, C.T. Chan and **Ping Sheng,** *New J. Phys.,* 11, 103014 (2009).

49. Microfluidic Fabrication of Porous Polymer Microspheres: Dual Reactions in Single Droplets, X. Gong, W.J. Wen and **Ping Sheng**, *Langmuir***,** 2009, 25 (12), 7072–7077 (2009).

50. Polydimethylsiloxane Microfluidic Chip with Integrated Microheater and Thermal Sensor, J.B.

Wu, W.B. Cao, W.J. Wen, D.C. Chang and **Ping Sheng,**, *Biomicrofluidics*, 3, 012005 (2009).

51. Generation and Manipulation of "Smart" Droplets, X. Niu, M. Zhang, J. Wu, W. Wen and **Ping Sheng**, *Soft Matter* 5, 576-581 (2009).

52. Design and Fabrication of Magnetically Functionalized Core/Shell Microspheres for Smart Drug Delivery, X. Gong, S. Peng, W. Wen, W. Li and **Ping Sheng**, *Adv. Funct. Mater.* 18, 1–6 (2009).

53. A Scaling Approach to the Derivation of Hydrodynamic Boundary Conditions, T. Qian, C. Qiu and **Ping Sheng**, *J. Fluid Mech*. 611, 333-364 (2008).

54. \Design and Integration of an All-in-one Biomicrofluidic Chip, L. Liu, W. Cao, J. Wu, W. Wen, D. Chang and **Ping Sheng**, *Biomicrofluidics* 2, 034103 (2008).

55. Influence of Liquid Phase on Nanoparticle-based Giant Electrorheological Fluid, X. Gong, J. Wu, X. Huang, W. Wen and **Ping Sheng**, *Nanotechnology* 19, 165602 (2008).

56. Moving Contact Line on Chemically Patterned Surfaces, X. P. Wang, T. Qian and **Ping Sheng**, *J. Fluid Mech*. 605, 59-78 (2008).

57. Silica-Polypyrrole Core-Shell Nanocomposites as Active Materials for Dielectrophoretic Displays, F. Miomandre, P. Audebert, J.P. Bonnet, A. Brosseau, P. Perriat, C. Weisbuch, W. Wen, and **Ping Sheng**, *J. Nanosci. Nanotechnol*. 8, 4353-4359 (2008).

58. Fabrication of Copper Nanowire Encapsulated in the Pore Channels of SBA-15 by Metal Organic Chemical Vapor Deposition, Zhang, Y., Lam, F.L.Y., Hu, X., Yan, Z.F. **and Ping Sheng**, *J. of Phys. Chem*. C 111, 12536-12541 (2007).

59. Microfluidic Manipulation in Lab-chips Using Electrorheological Fluid, X. Niu, L. Liu, W. Wen and **Ping Sheng**, *J. Intell. Material Syst. Struct*. 18, 1187-1190 (2007).

60. Formation of Polarized Contact Layers and the Giant Electrorheological Effect, X. Huang, W. Wen, Shihe Yang and **Ping Sheng**, *Int. J. Mod. Phys. B* 21, 4907-4913 (2007).

61. Hydrodynamic Boundary Condition at the Fluid-solid Interface, T. Qian, X. Wang and **Ping Sheng**, *Int. J. Mod. Phys. B* 21, 4131-4143 (2007).

62. Micropumps Based on the Enhanced Electroosmotic Effect of Aluminum Oxide Membranes, **Ping Sheng**, J. Y. Miao, Z. L. Xu, X. Y. Zhang, N. Wang, Z. Y. Yang, *Adv. Mater*. 19, 4234-4237 (2007).

63. Real-time Detection, Control, and Sorting of Microfluidic Droplets, X. Niu, M. Zhang, S. Peng, W. Wen and **Ping Sheng**, *Biomicrofluidics* 1, 044101-044112 (2007).

64. Characterizing and Patterning of PDMS-Based Conducting Composites, X. Niu, S. Peng, L. Liu, W. Wen and **Ping Sheng**, *Adv. Mater*. 19, 2682 (2007).

65. Numerical Study of Metastability due to Tunneling: The Quantum String Method, T. Qian, W. Ren, J. Shi, W. E and **Ping Sheng**, *Physica A* 379, 491-502 (2007).

66. Ground and Excited States of Three-Electron Quantum Dots, A. Fang, X. Chi and **Ping Sheng**, *Solid State Commun*. 142, 551-555 (2007).

67. Kinetic Energy Operator Approach to the Quantum Three-Body Problem with Coulomb

Interactions, X. Chi, A. Fang, W. Hsiang and **Ping Sheng**, *Solid State Commun*. 141, 173-177 (2007).

68. Phase Slips in a One-Dimensional Superconducting Wire: Crossover from Quantum Tunneling to Thermal Hopping, Z. Xu, T. Qian and **Ping Sheng**, *Physica C* 450, 118-123 (2006).

69. Catalyst effect of metal cations on pyrolysis of hydrocarbon molecules and formation of carbon nanotubes in the channels of AlPO(4)-5 crystals, J. P. Zhai, Z. M. Li, H. J. Liu, I. L. Li, **Ping Sheng**, X. J. Hu and Z. K. Tang, *J. Porous Mater*. 13, 291-295 (2006).

70. Catalytic Growth of 0.4 nm Single-walled Carbon Nanotubes Aligned Inside Porous Zeolite Crystals,H J. P. Zhai, Z. K. Tang, X. J. Hu, X. X. Zhang, and **Ping Sheng**, *Physica Status Solidi B* 243, 3082-3086 (2006).

71. A Variational Approach to Moving Contact Line Hydrodynamics, T. Qian, X.-P. Wang and **Ping Sheng**, *J. Fluid Mech*. 564, 333-360 (2006).

72. Moving Contact Line over Undulating Surfaces, X. Luo, X.-P. Wang, T. Qian and **Ping Sheng**, *Solid State Commun*. 139, 623-629 (2006).

73. Mechanisms of the Giant Electrorheological Effect, X. Huang, W. Wen, S. Yang and **Ping Sheng**, *Solid State Commun*. 139, 581-588 (2006).

74. Wetting-induced Electrorheological Effect, C. Shen, W. Wen, S. Yang and **Ping Sheng**, *J. Appl. Phys.* 99, 106104-106106 (2006).

75. Field-induced Giant Static Dielectric Constant in Nano-particle Aggregates at Room Temperature, F. Chen, J. Shulman, S. Tsui, Y. Y. Xue, W. Wen, **Ping Sheng**, and C. W. Chu, *Philos. Mag*. 86, 2393-2398 (2006).

76. A Novel Carbon Nanotube Structure Formed in Ultra-Long Nanochannels of Anodic Aluminum Oxide Templates, J. Y. Miao, Y. Cai, Y. F. Chan, **Ping Sheng** and N. Wang, *J. Phys. Chem. B* 110, 2080-2083 (2006).

77. Catalytic Effect of Metal Cations on the Formation of Carbon Nanotubes inside the Channels of $AlPO_4$-5 Crystal, J. P. Zhai, Z. M. Li, H. J. Liu, I. L. Li, **Ping Sheng**, X. J. Hu, Z. K. Tang, *Carbon* 44, 1151-1157 (2006).

78. Carbonization Mechanism of Tetrapropylammonium-hydroxide in Channels of $AlPO_4$-5 Single Crystals, ", J. P. Zhai, Z. K. Tang,, Z. M. Li, I. L. Li, F. Y. Jiang, **Ping Sheng** and X. Hu, *Chem. Mater.* 18, 1505-1511 (2006).

79. H\Molecular Hydrodynamics of the Moving Contact Line in Two-phase Immiscible Flows, T. Qian, X.-P. Wang and **Ping Sheng**, *Commun. Comput. Phys*. 1, 1-52 (2006).

80. Soft Condensed Matter - A Special Issue of Solid State Communications – Foreword, A.K. Sood, and **Ping Sheng**, *Solid State Commun.* 39, 1-12 (2006).

81. Liquid Crystal Pretilt Angle Control Using Nanotextured Surfaces, F. S. Y. Yeung, F. C. Xie, J. T. K. Wan, F. K. Lee, O. K. C. Tsui, H. S. Kwok, and **Ping Sheng**, *J. Appl. Phys*. 99, 124506 (2006).

82. Measurements of sound transmission through panels of locally resonant materials between impedance tubes, K. M. Ho, Z. Yang, X. X. Zhang, and **Ping Sheng**, *Appl. Acoust*. 66, 751-765 (2005).

83. Mechanism of the Giant Electrorheological Effect, **Ping Sheng**, *Int. J. Mod. Phys. B* 19, 1157-1162 (2005).

84. Fabrication and Optical Characterization of Gold-infiltrated Silica Opals, W. Li, G. Sun, F. Tang, W. Y. Tam, J. Li, C. T. Chan, and **Ping Sheng**, *J. Phys. Condens. Matter* 17, 2177-2190 (2005).

85. New Results on Nano-Textured Surfaces Alignment Layers, F. S. Y. Yeung, F. C. Xie, H. S. Kwok, J. Wan, O. Tsui and **Ping Sheng**, *EuroDisplay,* 514-516 (2005).

86. Chiral Microstructures (Spirals) Fabrication by Holographic Lithography, Y. K. Pang, J. C. W. Lee, H. F. Lee, W. Y. Tam, C. T. Chan and **Ping Sheng**, *Opt. Express* 13, 7615-7620 (2005).

87. Strong Optical Force Induced by Morphology-Dependent Resonances, J. Ng. C. T. Chan, **Ping Sheng** and Z. F. Lin, *Opt. Lett*. 30, 1956-1958 (2005).

88. Neutral Nanoparticle-based Display, W. Wen, C. Weisbuch, D. M. Phuong, G. Lu, W. Ge, C. T. Chan and **Ping Sheng**, *Nanotechnology* 16, 598-601 (2005).

89. Two- and Three-dimensional Ordered Structures of Hollow Silver Spheres Prepared by Colloidal Crystal Templating, Z. Chen, P. Zhan, Z. L. Wang, J. H. Zhang, W. Y. Zhang, N. B. Ming, C. T. Chan, **Ping Sheng**, *Adv. Mater*. 16 (5), 417 (2004).

90. Application of Optimal Basis Functions in Full Waveform Inversion, **Ping Sheng**, G. Sun and Q. Chang, *Methods and Applications of Analysis* 11, 345-352 (2004).

91. Theoretical Studies on the Transmission and Reflection Properties of Metallic Planar Fractals, L. Zhou, C. T. Chan and **Ping Sheng**, *J. Phys. D.: Appl. Phys.* 37, 368-373 (2004).

92. Geometric Characterization of Metastable States in Tetrahedral Bonded Amorphous Semiconductors, X. Fu, K. Y. Szeto, S. Dyrting and **Ping Sheng**, *Physica B* 348, 353-361 (2004).

93. Optical Micro-Characterization of Single-Walled Carbon Nanotubes Extracted from AFI Crystals by Visible Emission and Raman Scattering, J. T. Ye, N. Naka, Y. Morihira, Z. K. Tang, W. K. Ge, **Ping Sheng**, I. Kudryashov and N. Nagasawa, *Jpn. J. Appl. Phys*. 43, 7354-7355 (2004).

94. Electrical and Optical Properties of Ultra-small Carbon Nanotubes Arrayed in Channels of Zeolite Single Crystals, Z. K. Tang, Z. M. Li, I. L. Li, X. Zhang, N. Wang, J. Wang, and **Ping Sheng**, *Mater. Trans*. 44, 2066-2069 (2003).

95. Large-area Two-dimensional Mesoscale Quasi-crystals, X. Wang, C. Y. Ng, W. Y. Tam, C. T. Chan and **Ping Sheng**, *Adv. Mater.* 15, 1526-1528 (2003).

96. Novel Properties of 0.4 nm Single-walled Carbon Nanotubes Templated in the Channels of AlPO4-5 Single Crystals, Z. K. Tang, N. Wang, X. X. Zhang, J. N. Wang, C. T. Chan, and **Ping Sheng**, *New J. Phys*. 5, 146 (2003).

97. Two-and Three-dimensional Ordered Structures formed by Electro-magnetorheological Colloids, W. Wen and **Ping Sheng**, *Physica B* 338, 343-346 (2003).

98. Locally Resonant Sonic Materials, **Ping Sheng**, X. X. Zhang, Z. Liu and C. T. Chan, *Physica B* 338, 201-205 (2003).

99. Optical Properties of Metallo-dielectric Microspheres in Opal Structures, Y. Jiang, C. Whitehouse, J. Li, W. Y. Tam, C. T. Chan and **Ping Sheng**, *J. Phys.: Condens. Matter* 15, 5871-5879 (2003).

100. Generalized Navier Boundary Condition for the Moving Contact Line, T. Qian, X. P. Wang and **Ping Sheng**, *Comm. Math. Sci*. 1, 333-341 (2003).

101. Low-frequency Soundproof Concrete, Z. Li, W.L. Siu, and **Ping Sheng**, *Mag. Concr. Res*. 55, 177-181 (2003).

102. Ultra-small Single-walled Carbon Nanotubes and Their Superconductivity Properties, Z.K. Tang, Z. K. Tang, L.Y. Zhang, N. Wang, X. X. Zhang, J. N. Wang, G. D. Li, Z. M. Li, G. H. Wen, C. T. Chan, and **Ping Sheng**, *Synth. Met*. 133-134, 689-693 (2003).

103. Special issue: Proceedings of 11th International Conference of Discrete Simulation of Fluid Dynamics and Soft Condensed Matter (DSFD2002) - Shanghai, China - 5-9 August 2002 - Preface, S.Y. Chen, R.B. Tao, and **Ping Sheng**, *Int. J. Mod. Phys. B* 17, 1-2 (2003).

104. Third-order Nonlinear Properties of Au Clusters Containing Dielectric Thin Films, H. Ma, G.K.L. Wong, and **Ping Sheng**, *Optical Properties of Nanostrucrured Random Media Book Series: Topics in Applied Physics*, 82, 41-61 (2002).

105. Phononic Crystals, S. Yang, J. H. Page, Z. Liu, M. L. Cowan, C. T. Chan and **Ping Sheng**, 2001 Canadian Physical Society/GSI-Lumonics Competition Winner, *Physics in Canada* (July/August 2001 issue), 187-189 (2001).

106. Level Spacing Statistics in Small Metallic Clusters, Lin Yi and **Ping Sheng**, *Physica B* 296, 98-106 (2001).

107. Plasmon-enhanced Absorption by Optical Phonons in Metal-dielectric Composites, M. Gadenne, V. Podolskiy, P. Gadenne, **Ping Sheng** and V. M. Shalaev, *Eurohys. Lett*. 53, 364-370 (2001).

108. Dynamic Flow, Broken Surface Anchoring, and Switching Bistability in Three-terminal Twisted Nematic Liquid-crystal Displays, T. Qian, Z. Xie, H. S. Kwok and **Ping Sheng**, *J. Appl. Phys*. 90, 3121-3123 (2001).

109. Multiple Scattering Theory and its Application to Photonic Band Gap Systems Consisting of Coated Spheres, W. Zhang, C. T. Chan and **Ping Sheng**, *Opt. Express* 8, 203-208 (2001).

110. Microscopic Description of Double-well Potential in Tetrahedrally Bonded Amorphous Semiconductors, H.P. Fang, X.J. Fu, S. Dyrting, K.S. Szeto, and **Ping Sheng**, *Physica B*, 279, 211-213 (2000).

111. Growth and Characterization of Au Clusters on Alkanethiol Self-assembled Monolayers, B. Wang, X. Xiao and **Ping Sheng**, *J. Vac. Sci. Technol*. B18, 2351-2358 (2000).

112. Multiply Coated Microspheres: A Platform for Realizing Fields-Induced Structural Transition and Photonic Bandgap, **Ping Sheng**, W. Wen, N. Wang, H Ma, Z. Lin, W. Y. Zhang, X. Y. Lei, Z. L Wang, D. G. Zheng, W. Y. Tam and C. T. Chan, *Pure Appl. Chem*. 72, 309-315 (2000).

113. Breit Interaction, Level Spacing Statistics and Far-infrared Absorption in Small Metal Clusters, Lin Yi and **Ping Sheng**, *Solid State Commun.* 114, 177-192 (2000).

114. Electrorheological Fluids Using Bi-dispersed Particles, W. Y. Tam, W. Wen, and **Ping Sheng**, *Physica B* 279, 171-173 (2000).

115. Field Induced Structural Transition in Mesocrystallites, W. Wen, N. Wang, H. Ma, Z. Lin, W. Y. Tam, C. T. Chan, and **Ping Sheng**, *Physica B* 279, 168-170 (2000).

116. Photonic Band Gaps from Metallo-dielectric Spheres, C. T. Chan, W. Y. Zhang, Z. L. Wang, X. Y. Lei, W. Y. Tam, and **Ping Sheng**, *Physica B* 279, 150-154 (2000).

117. Theory and Experiments on Electrorheological Fluids, W. Y. Tam, W. Wen, H. Ma, G. H. Yi, M. M. T. Loy, and **Ping Sheng**, *Int. J. Mod. Phys. B* 13, 1750-1757 (1999).

118. Diffusive Transport of Acoustic Waves in Strongly Scattering Media, J.H. Page, I.P. Jones, H.P. Schriemer, M.L. Cowan, D.A. Weitz, and **Ping Sheng**, *Physica B* 263, 37-39 (1999).

119. Biaxial Ordering and Field-induced Configurational Transition in Nematic Liquid Crystals, T. Qian, and **Ping Sheng**, *Liq. Cryst*. 26, 229-233 (1999).

120. Tunneling States in Tetrahedrally Bonded Amorphous Semiconductors, S. Dyrting, H.P. Fang, K. Y. Szeto, and **Ping Sheng**, *Europhysics Lett.* 48, 403-409 (1999).

121. Level Spacing Statistics and Far-Infrared Absorption in Small Metal Clusters, L. Yi and **Ping Sheng**, *Physica A* 265, 500-507 (1999).

122. A Method for Measuring Electrokinetic Coefficients of Porous Media and its Potential Application in Hydrocarbon Exploration, Y. G. Jiang, F. K. Shan, H. M. Jin, L.W. Zhou, and **Ping Sheng**, *Geophys. Res. Lett*. 25, 1581-1584 (1998).

123. Electrorheological Fluids Using Bidispersed Particles, W. Wen, W. Y. Tam, and **Ping Sheng**, *J. Mater. Res*. 13, 2783-2786 (1998).

124. Ward Identities for Interacting Electronic Systems, H. T. Nieh, **Ping Sheng**, and X. B. Wang, *Phys. Lett. A* 246, 542-548 (1998).

125. Fabrication of PZT Microspheres for Application in Electrorheological Fluids, W. Wen, W. Y. Tam, and **Ping Sheng**, *J. of Materials Science Lett*. 17, 419-421 (1998).

126. Third-Order Optical Nonlinearity Enhancement through Composite Microstructures, Hongru Ma, Rongfu Xiao, and **Ping Sheng**, *J. Opt. Soc. Am. B* 15, 1022-1029 (1998).

127. Enhancement of Optical Nonlinearity through Anisotropic Microstructures, K. P. Yuen, M. F. Law, K. W. Yu, and **Ping Sheng**, *Opt. Commun*. 148, 197-207 (1998).

128. Classical Wave Propagation in Strongly Scattering Media, J. H. Page, H. P. Schriemer, I. P. Jones, D. A. Weitz, and **Ping Sheng**, *Physica A* 241, 64-71 (1997).

129. Ward Identity for Elastic Wave Transport in Disordered Media, H. T. Nieh and **Ping Sheng**, *Phys. Lett. A* 235, 259-263 (1997).

130. Electrical-properties of Bitumen Emulsions, J. M. Sowa, M. Y. Zhou, T. Chen, A. J. Serres, M. C. Sieben, and **Ping Sheng**, *Fuel* 74, 1176-1179 (1995).

131. Far infrared Optical Properties of Ferromagnetic Cermets, M. Gadenne, J. Plon, P. Gadenne, **Ping Sheng**, *Opt. Commun*. 107, 373 (1994).

132. Virtual-Mode Excitations in Thin Metallic Films, P. Gadenne, M. Gadenne, J. Lafait, **Ping Sheng**, M. Zhou, and A. F. Rupert, *Europhys. Lett*. 27 (8), 623 (1994).

133. Beyond the Effective Medium: Quasi Modes in Disordered Media, **Ping Sheng**, X. Jing and M. Zhou, *Physica A* 207, 37 (1994).

134. Sound Propagation in Colloidal Systems, L. Ye, J. Liu, **Ping Sheng**, J. S. Huang, and D. A. Weitz, *J. de Phys. IV, Colloque Cl, supplement au J. de Phys. II* 3, 183 (1993).

135. Photonic Bandtail in lD Randomly-Perturbed Periodic Systems, J. M. Frigerio, J. Rivory and **Ping Sheng**, *Opt. Comm*. 98, 231 (1993).

136. Optical Studies of Pretransitional Surface Ordering and Disordering in Liquid-crystals, T. Moses, Y.R. Shen, B.Z. Li, and **Ping Sheng**, *Mol. Cryst. Liq. Cryst*. 223, 85-92 (1992).

137. Effective Magnetic Permeability of Granular Ferromagnetic Metals, **Ping Sheng** and M. Gadenne, *J. Phys.: Cond. Matter* 4, 9735 (1992).

138. Numerical Simulation of Hopping Conductivity in Granular Metal Films, M. Zhou, **Ping Sheng**, B. Abeles, and L. Chen, *Philos. Mag. B* 65, 867 (1992).

139. Strong Localization of Light in Two-Dimensional Disordered Dielectric Media, A. R. McGurn, **Ping Sheng** and A. A. Maradudin, *Opt. Comm*. 91, 175 (1992).

140. Optical Properties of Finely Structured Metal-Insulator Superlattice Particulates, S. T. Chui, M. Zhou, **Ping Sheng** and Z. Chen, *J. Appl. Phys*. 69, 3366 (1991).

141. Mesoscopic Transport Properties of 2D Disordered Metallic Films: A Proposal for the Observation of Anderson Localization, **Ping Sheng** and Z. Q. Zhang, *J. of Phys: Cond. Matter* 3, 4257 (1991).

142. Consistent Modeling of the Electrical and Elastic Properties of Sedimentary Rocks, **Ping Sheng**, *Geophysics* 56, 1236 (1991).

143. Two-Dimensional Photonic Band Structures, M. Plihal, A. Shambrook, A. A. Maradudin and **Ping Sheng**, *Optm. Comm*. 80, 199 (1991).

144. Fluid Flow in Restricted Geometries, **Ping Sheng** and M. Zhou, *Isr. J. Chem*. 31, 71 (1991).

145. Infrared Optics of Structured Metal-Insulator Particulates, M. Y. Zhou, **Ping Sheng**, Z. Chen and S. T. Chui, *Appl. Opt*. 30, 145 (1991).

146. Dynamic Rigidity Percolation of Inverted AOT Micellar Solutions, J. S. Huang, L. Ye, D. A. Weitz, **Ping Sheng**, S. Bhattacharya, and M. J. Higgins, *Progress in Colloidal and Polymer Science* 81, 70 (1990).

147. Localization and Back-Scattering Spectrum of Seismic Waves in Stratified Lithology, B. White, **Ping Sheng** and B. Nair, *Geophysics* 55, 1158 (1990).

148. Frequency Content of Randomly Scattered Signals II: Inversion, G. Papanicolaou, M. Postel, **Ping Sheng** and B. White, *Wave Motion* 12, 527 (1990).

149. Frequency Content of Randomly Scattered Signals I, M. Asch, G. Papanicolaou, M. Postel, **Ping Sheng** and B. White, *Wave Motion* 12, 429 (1990).

150. Microsturcture and Optical Properties of Random Media, **Ping Sheng**, *Physica A*, 157, 238-243 (1989).

151. Lithological Correlations and Seismic Wave Localization in the Earth's Subsurface, **Ping Sheng**, B. White and B. Nair, *Inverse Probl*. 5, L57 (1989).

152. Scaling Behavior for Dynamic Permeability in Porous Media, **Ping Sheng**, M. Y. Zhou, E. Charlaix, A. Kushnick, and J. P. Stokes, *Physica A* 157, 514 (1989).

153. Microstructural Effects in the Optical Properties of Random Composites, **Ping Sheng**, *Physica A* 157, 238 (1989).

154. Probing a Random Medium with a Pulse, R. Burridge, G. Papanicolaou, **Ping Sheng** and B. White, *SIAM J. of Appl. Math*. 49, 582 (1989).

155. An Empirical Bayesian Approach to Gamma-Ray Log Deconvolution, B. White, B. Nair, S. Kerford, and **Ping Sheng**, *Geophysics* 52, 379-379 (1987).

156. Properties of Fractal Colloidal Aggregates, H. Lindsay, M. Lin, D. Weitz, Z. Chen, **Ping Sheng**, R. Klein and P. Meakin, *J. Chem. Soc. Faraday Discussions* 83, 153 (1987).

157. Melting of Thin Supported Films, J. R. Schrieffer, **Ping Sheng**, R. W. Cohen and W. P. Su, *Phys. Scr*. 35, 212 (1987).

158. Bayesian Deconvolution of Gamma-Ray Logs, **Ping Sheng**, B. White, B. Nair, and S. Kerford, *Geophysics* 52, 1535 (1987).

159. Optical-properties of Fractal Clusters, Z. Chen, H. M. Lindsay, D. A. Weitz, P. Meakin, and **Ping Sheng**, *J. Opt. Soc. Am. A – Optics Image Science and Vision* 3, 112-112 (1986).

160. An Efficient Numerical Evaluation of the Green's Function for the Helmholtz Operator on Periodic Structures, K. Jordan, G. Richter and **Ping Sheng**, *J. Comp. Phys*. 63, 223 (1986).

161. A Generalized Differential Effective Medium Theory, A. Norris, A. J. Callegari and **Ping Sheng**, *J. Mech. and Phys. of Solids* 33, 525 (1985).

162. First-Principle Approach to the Calculation of Elastic Moduli for Arbitrary Periodic Composites, Ruibao Tao and **Ping Sheng,** *J. Acoust. Soc. Am*. 77, 1651 (1985).

163. Acoustic Reflections from Complex Strata, R. B. Stephens and **Ping Sheng**, *Geophysics* 50, 1100 (1985).

164. Effective Medium Theories for Two-Phase Dielectric Media, A. Norris, A. J. Callegari and **Ping Sheng**, *J. Appl. Phys*. 57, 1990 (1985).

165. Phonon Absorption by Small Metallic Particles, **Ping Sheng**, *J. Opt. Soc. Am. A. – Optics Image Science and Vision* 1, 1251-1251 (1984).

166. Theory of Electrical-conduction in Carbon Polymer Composites, **Ping Sheng**, *J. Rheol*. 28, 464-464 (1984).

167. The Melting Behavior of Small Clusters of Atoms, N. Quirke and **Ping Sheng**, *Chem. Phys. Lett*. 110, 63 (1984).

168. Optical Absorption of Thin Film on a Lambertian Reflector Substrate, **Ping Sheng**, *IEEE Trans. on Elect. Devices* 31, 634 (1984).

169. The Coulomb Quasigap and the Metal-Insulator Transition in Granular Systems, **Ping Sheng** and J. Klafter, *J. Phys. C* 17, L93 (1984).

170. Low-frequency Plasmon Resonance in Metal Dielectric Composite, J. I. Gittleman, and **Ping Sheng**, *J. Opt. Soc. Am.* 72, 1747-1747 (1982).

171. Tunneling Conduction in Carbon-Polymer Composites, E. K. Sichel, J. I. Gittleman and **Ping Sheng**, *"Carbon Black-Polymer Composite"* (Marcel-Dekker, N. Y. 1982) p. 51.

172. Electrical Properties of Carbon-Polymer Composites, E. K. Sichel and J. I. Gittleman and **Ping Sheng**, *J. Elect. Matls.* 11, 699 (1982).

173. Exact Eigenfunctions for Square-wave Gratings, R.S. Stepleman, and **Ping Sheng**, *J. Opt. Soc. Am.* 71, 1572-1572 (1981).

174. Microstructure and Dielectric-Properties of Granular Composite Films, **Ping Sheng**, *Opt. Laser Technol.* 13, 253-260 (1981).

175. Theory for Melting Anomalies in Adsorbate Systems, **Ping Sheng**, R. W. Cohen and J. R. Schrieffer, *Physica* B 108, 789 (1981).

176. Melting Transition of Small Molecular Clusters, **Ping Sheng,** R. W. Cohen and J. R. Schrieffer, *J. Phys. C* 14, L565 (1981).

177. Microsturcture and Optical Properties of Composite Material Films, *Ping Sheng*, *J. Opt. Soc. Am.* 70, 1617-1617 (1980).

178. Theoretical Considerations of Optical Diffraction from RCA Videodisc Signals, **Ping Sheng**, *RCA Review* 39, 512 (1979).

179. The Application of Vector Theory to Videoisc Optical Readout and Inspection, W. R. Roach, A. H. Firester, and **Ping Sheng**, *J. Opt. Soc. Am.* 68, 1406-1406 (1978).

180. Signal-Distortion Noise in Volume Phase Holograms, **Ping Sheng** and W. Burke, *Opt. Quant. Electron.* 9, 427 (1977).

181. Knife-Edge Scanning Measurements of Subwavelength Focused Light Beams, A. Firester, M. Heller and **Ping Sheng**, *Appl. Optics* 16, 1971 (1977).

182. Orientation Effects in the Friction of a Hard Ellipsoid Sliding on Rubber, F. Trachman, R. Williams and **Ping Sheng**, *J. Appl. Phys.* 48, 3270 (1977).

183. Temperature Dependence of the Electrical Conductivity of Granular Metal Films, **Ping Sheng** and B. Abeles, *Thin Sol. Films* 41, L39 (1977).

184. Crosstalk Noise from Multiple Thick-Phase Holograms, W. Burke and **Ping Sheng**, *J. Appl. Phys.* 48, 681 (1977).

185. Effect of Director Fluctuations on the Nematic Distribution Function, **Ping Sheng**, *Sol. St. Comm.* 18, 1165 (1976).

186. Comment on "Elastic Continuum Theory Cutoffs and Order in Nematics and Solids", **Ping**

Sheng, E. B. Priestly and P. J. Wojtowicz, *J. Chem. Phys*. 63, 1040 (1975).

187. Critical Point in the Magnetic Field-Temperature Phase Diagram of Nematic Liquid Crystals, P. J. Wojtowicz and **Ping Sheng**, *Phys. Lett*. 48 A, 235 (1974).

188. Hard Rod Metal of the Nematic-Isotropic Phase Transition, **Ping Sheng**, *RCA Review* 35, 132 (1974).

189. Effect of Bundling in a Lattice Gas Model of Liquid Crystals, **Ping Sheng**, *J. Chem. Phys*. 59, 1942 (1973).

190. Intermediate Coupling Polaron Theory: A Pade Approximant Approach, **Ping Sheng** and J. D. Dow, *Phys. Stat. Sol. (b)* 44, K131 (1971).

Conference Proceedings

1. Microscopic Mechanism of the Giant Electrorheological Effect, S. Chen, X. Huang, W. Wen, **Ping Sheng** and N. F. A. Van Der Vegt, in *Electro-Rheological Fluids and Magneto-Rheological Suspensions – Proc. of the twelfth International Conference*, R. Tao, edit, (World Scientific Publishing Co. Pte. Ltd, Singapore, 2011), p. 407-414.

2. Onsager Principle and Electrorheological Fluid Dynamics, **Ping Sheng**, J. Zhang and C. Liu, in *Proc. of the International Symposium on Non-Equilibrium Soft Matter*, (Progress of Theoretical Physics Supplement No. 175, 2008), P. 131-143

3. Dynamic Mass Density and Acoustic Metamaterials, **Ping Sheng**, J. Mei, Z. Liu and W. Wen, in *Continuum Models and Discrete Systems CMDS 11 – Proc. of the International Symposium*, (Collection Sciences de la Matiere, 2008), P. 393-411.

4. Continuum Modelling of Nanoscale Hydrodynamics, **Ping Sheng**, T. Qian and X. Wang, in *Nanoscale Phenomena Basic Science to Device Applications*, Z. K. Tang and Ping Sheng edits, (Springer, New York, 2008), p. 99-116.

5. Dynamic Mass Density and Acoustic Metamaterials, **Ping Sheng**, J. Mei, Z. Liu and W. Wen, *Physica B* 394, 256-261 (2007).

6. Magnetorheological and Electrorheological Fluid Highlights - 2006, J. D. Carlson, **Ping Sheng** and W. Wen, in *Actuator 2006 - Proc. of the 10th International Conference on New Actuators*, H. Borgmann, edit, (HVG Hanseatische Veranstaltungs - GmbH, Bremen, 2006), p. 235-240.

7. Mechanism of the Giant Electrorheological Effect, **Ping Sheng**, in *Proc. of the Ninth International Conference on Electrorheological Fluids and Magnetorheological Suspensions*, K. Lu, R. Shen and J. Liu, edits, (World Scientific Publishing Co. Pte. Ltd., Singapore, 2005), p. 143-148.

8. Phononic Crystals, J. H. Page, A. Sukhovich, S. Yang, M.L. Cowan, F. Van Der Biest, A. Tourin, M. Fink, Z. Liu, C.T. Chan, and **Ping Sheng**, *Phys. Stat. Sol. (b)* 241, 3454-3462 (2004).

9. A New Approach for Quantum Three-body Coulomb System, X. Chi, W.Y. Hsiang and **Ping Sheng**, *Bulletin of the American Physical Society*, 49 (2004).

10. Theory of the Giant Electrorheologcial Effect, X. Huang, W. Wen, S. Yang and **Ping Sheng**, *Bulletin of the American Physical Society*, 49 , (2004).

11. 3D Phononic Crystals, J. H. Page, S. Yang, M. L. Cowan, Z. Liu, C. T. Chan and **Ping Sheng**, *Wave Scattering in Complex Media: From Theory to Applications*, B. van Tiggelen and S. Skipetrov, edits, (Kluwer Academic Publishers, Netherlands, 2003), p. 283-307.

12. Superconductivity in 4-Angstrom Carbon Nanotubes, **Ping Sheng**, in *Proc. of the International Symposium on Frontiers of Science, in celebration of the 80th birthday of C. N. Yang*, H. T. Nieh, edit, (World Scientific Publishing Co. Pte. Ltd., Singapore, 2003), p. 95.

13. Field-induced 3D and 2D Mesocrystals of Ferro-Magnetically Coated Microspheres, **Ping Sheng**, W. Wen, L. Zhang, N. Wang, Z. Lin, H. Ma, C. T. Chan and W. Y. Tam, in *Frontiers in Materials Physics* (Volume 1), D. Chakravarty and S. P. Sen Gupta, edits, (Allied Publishers Pvt. Ltd., New Delhi, India, 2002) p. 16-24.

14. Upper Bounds on Electrorheological Properties, **Ping Sheng** and H. R. Ma, in *Mathematics of Multiscale Materials*, K. Golden et al., edits, (Springer, New York, 1998) p. 223-230.

15. Electron Weak Localization in Disordered Films, T. Li and **Ping Sheng**, *in 4th International Conference on Electrical Transport and Optical Properties of Inhomogeneous Media (ETOPIM4)*, (Physica A, 241 , 118-121, 1997)

16. Dielectric Electrorheological Fluids: Ground State, Frequency Characteristics, Effects of Water and Physical Upper Bounds, H. Ma, W. Wen, W. Y. Tam and **Ping Sheng**, in *Progress in Liquid Physics* 1, K. Lu and X. Zhou, edits, (Wuhan University Press, Wuhan, China, 1997) p. 215-224. (in Chinese)

17. Microstructured Particles for Electrorheological Applications, **Ping Sheng,** W. Y. Tam, W. Wen, H. Ma, and M. M. T. Loy, in *Nanostructured Materials: Clusters, Composites, and Thin Films*, V. Shalaev and M. Moskovits, edits. (American Chemical Society, Washington, DC, 1997), p.41-53.

18. Transition from Ballistic to Diffusive Behavior for Multiply Scattered Waves, Z. Q. Zhang and **Ping Sheng**, in *Photonic Band Gap Materials*, C. Soukoulis, edit. (Kluwer Academic Publishers, Boston, 1996), p. 715.

19. Wave Confinement and Localization: Dimensional Crossover Effect, Z. Q. Zhang and **Ping Sheng**, in *Photonic Band Gap Materials*, C. Soukoulis, edit. (Kluwer Academic Publishers, Boston, 1996), p. 703.

20. Elastic Percolation Behavior for Solid-Liquid Composites, **Ping Sheng** and M. Zhou, in *Continuum Models and Discrete Systems*, K. Markov, edit. (World Scientific Publishing Co., Singapore, 1996), p. 258.

21. Waves in Disordered Media: The Intermediate Frequency Regime, **Ping Sheng**, in *Statphys 19: The 19th IUPAP International Conference on Statistical Physics*, B. Hao, edit. (World Scientific, Singapore, 1996) p.330.

22. Wave Localization Phenomena in Anisotropic and Inhomogeneous Media, **Ping Sheng**, in *Theory of Mesoscopic Physics* (title translated from Chinese), H. C. Li and Y. C. Zhou, edits. (Chung Shan University Press, Guangzhou, China, 1995), p.113.

23. Electronic Transport in Granular Metal Films, **Ping Sheng**, in *Nanophase Materials: Synthesis-Properties-Applications*, G. C. Hadjipanayis and R. W. Siegel, edits. (Kluwer Academic Publishers, Dordrecht, 1994), p. 381.

24. A Mean-Field Theory of Melting for Microcrystals, **Ping Sheng** and M. Zhou, in *On Clusters*

and Clustering: From Atoms to Fractals, P. J. Reynolds, edit. (North-Holland, Amsterdam, 1993), p. 221.

25. Localization Transition in Anisotropic and Inhomogeneous Systems, Z. Q. Zhang and **Ping Sheng**, in *Photonic Band Gaps and Localization*, C. M. Soukoulis, edit. (Plenum Press, New York, 1993), p. 379.

26. The Dynamic Permeability of a Compressible Fluid and the Role of Bulk Viscosity, **Ping Sheng** and M. Zhou, in *Macroscopic Behavior of Heterogeneous Materials from Microstructure*, S. Torquato and D. Krajcinovic, edits., Applied Mechanics Division--vol. 147, Am. Soc. of Mech. Engineers, p. 145 (1992).

27. Observation of Elastic Wave Localization, L. Ye, G. D. Cody, M. Zhou, **Ping Sheng** and A. Norris, *Application of Multiple Scattering Theory to Materials Science*, W. H. Butler, P. H. Dederichs, A. Goins, and R. L. Weaver, edits. (Materials Research Society, Pittsburgh, PA, 1992), p. 435.

28. Wave Propagation in Dispersed Random Media, **Ping Sheng**, X. Jing and M. Zhou, *Application of Multiple Scattering Theory to Materials Science*, W. H. Butler, P. H. Dederichs, A. Goins, and R. L. Weaver, edits. (Materials Research Society, Pittsburgh, PA, 1992), p. 423.

29. Novel Acoustic Excitations in Suspensions of Hard-Sphere Colloids, J. Liu, L. Ye, D. A. Weitz and **Ping Sheng**, *Scaling in Disordered Materials*, J. Stokes, M. O. Robbins, and T. A. Witten, edits. (Materials Research Society, Pittsburgh, PA, 1991), p. 167.

30. Melting and Thermal Characteristics of Small Granular Particles, **Ping Sheng** and M. Y. Zhou, *Physical Phenomena in Granular Materials*, G. D. Cody, T. Geballe, and P. Sheng, edits. (Materials Research Society, Pittsburgh, PA, 1990), p. 579.

31. Anderson Localization in Anisotropically Random Media, **Ping Sheng**, W. Xue, Z. Q. Zhang and Q. J. Chu, *Physical Phenomena in Granular Materials*, G. D. Cody, T. Geballe, and P. Sheng, edits. (Materials Research Society, Pittsburgh, PA, 1990), p. 193.

32. Numerical Simulation of Hopping Conductivity in Granular Metals, L. F. Chen, **Ping Sheng**, B. Abeles and M. Y. Zhou, *Physical Phenomena in Granular Materials*, G. D. Cody, T. Geballe, and P. Sheng, edits. (Materials Research Society, Pittsburgh, PA, 1990) p. 187.

33. A Quantum Percolation Model for Magnetoconductance of Granular Metal Films, Z. Q. Zhang and **Ping Sheng**, *Physical Phenomena in Granular Materials*, G. D. Cody, T. Geballe, and P. Sheng, edits. (Materials Research Society, Pittsburgh, PA, 1990), p. 135.

34. Phonon Dispersion in Suspensions of Hard Sphere Colloids, D. A. Weitz, J. Liu, L. Ye and **Ping Sheng**, *Physical Phenomena in Granular Materials*, G. D. Cody, T. Geballe, and P. Sheng, edits. (Materials Research Society, Pittsburgh, PA, 1990), p. 93.

35. Wave Scattering and Localization in Anisotropic Random Media, **Ping Sheng**, *Elastic Waves and Ultrasonic Nondestructive Evaluation*, S. K. Datta, J. D. Achenbuch, and Y. S. Rajapakee, edits., (North-Holland N. Y. 1990), p. 47.

36. Dynamics of Concentrated Colloidal Suspensions, D. A. Weitz, L. Ye, **Ping Sheng**, J. S. Huang, D. J. Pine, J. Liu, P. M. Chaiken, and P. N. Pusey, *Macromolecular Liquids*, MRS Symposium Proc. 177, 207 (1990).

37. Dynamic Rigidity Percolation in AOT Micelles and Microemulsions, L. Ye, D. A. Weitz, **Ping**

Sheng and J. S. Huang, *Macromolecular Liquids*, MRS Symposium Proc. 177, 111 (1990).

38. The Statistics of Random Backscatter: A Comparison of Theory with Computer Simulations, G. Papanicolaou, M. Postel, **Ping Sheng** and B. White, *Disorder and Nonlinearity*, A. R. Bishop, D. K. Campbell, and S. Pnevmatikos, eds. (Springer-Verlag, N. Y. 1989), p. 110.

39. Statistical Inversion of Randomly-Scattered Signals, M. Asch, G. Papanicolaou, M. Postel, **Ping Sheng** and B. White, *Proc. of 59th SEG Annual Meeting and Exposition*, vol.2, p. 989 (1989).

40. Effective Medium Modeling of the Electrical and Elastic Properties of Sedimentary Rocks, **Ping Sheng**, *Proc. of 59th SEG Annual Meeting and Exposition*, vol. 1, p. 585 (1989).

41. Wave Localization Characteristics in the Time Domain, **Ping Sheng**, B. White, Z. Q. Zhang, and G. Papanicolaou, *Proc. of 3rd Asia Pacific Physics Conference* (World Scientific Publishing Co., 1988), vol. 1, p. 706.

42. Scaling Behavior of Dynamic Permeability in Porous Media, **Ping Sheng**, M. Y. Zhou, E. Charlaix, A. Kushnick and J. P. Stokes, *Pore Structure and Permeability of Cementitious Materials*, MRS Symposium Proc. vol. 137, 35 (1988), L. R. Roberts and J. P. Skalny, eds.

43. Optical Properties of Finely-Structured Particulates, **Ping Sheng**, M. Y. Zhou, Z. Chen and S. T. Chui, *Multicomponent Ultrafine Microstructures*, MRS Symposium and Proc. vol. 132, 119 (1988), L. E. McCandlish, D. E. Polk, R. W. Siegel and B. H. Kear, eds.

44. Seismic Wave Multiple Scattering and Localization in Stratified Lithology, **Ping Sheng**, B. White and B. Nair, *Proc. of the 58th SEG Annual Meeting and Exposition*, vol. II, p. 1166 (1988).

45. Distribution of Local Fields in Random Dielectrics, **Ping Sheng** and Z. Chen, *Proc. Int. Conf. on Electrodynamics of Interfaces and Composites* (World Scientific Publishing Co., Inc. 1988), p. 397.

46. Pulse Reflection by a Random Medium, R. Burridge, G. Papanicolaou, **Ping Sheng** and B. White, *"Non-Classical Continuum Mechanics"*, London Math. Soc. Lecture Note Series 122, R. J. Knops and A. A. Lacey, eds. (1987), p. 3.

47. Direct and Inverse Problems for Pulse Reflection from a Stratified Random Halfspace, R. Burridge, G. Papanicolaou, **Ping Sheng** and B. White, *Proc. of SIAM Workshop on Multiphase Flow* (1986).

48. An Empirical Bayesian Approach to Gamma-Ray Log Deconvolution, **Ping Sheng**, B. White, B. Nair, and S. Kerford, *Proc. of 56th SEG Annual Meeting and Exposition*, p. 19 (1986).

49. Microstructures and Physical Properties of Composites, **Ping Sheng**, *Proc. of Int. Workshop on Homogeneization and Effective Moduli of Comkposites*, J. L. Ericksen, D. Kinderlehrer, R. Kohn, and J. L. Lions, edits. (Springer-Verlag, N. Y. 1986) p. 196.

50. Dielectric Constant and Elastic Moduli of Inhomogeneous Composites, **Ping Sheng**, *Proc. of Int. Symp. on Multiple Scattering of Waves in Random Media and Random Rough Surfaces*, V. V. Varadan and V. K. Varadan, edits. (Pennsylvania State University Press, 1986) p. 241.

51. Electrical Conduction in Heterogeneous Composites, **Ping Sheng**, *Proc. of Advanced Summer School on Electronic Properties of New Materials*, Henrik Stubb, edit. (Helsingfors, Helsinki, 1985) p. 61.

52. Consistent Theoretical Description for Electrical and Acoustic Properties of Sedimentary Rocks, **Ping Sheng** and A. J. Callegari, *AIP Conf. Proc*. 107, 144 (1984).

53. Nematic-Substrate Interaction and the Boundary Layer Phase Transition, **Ping Sheng**, *Liq. Cryst. and Ordered Fluids*, vol. 4, A. C. Griffin and J. F. Johnson, edits. (Plenum Press, N. Y. 1984) p. 889.

54. Spatial Correlations in Nematic Liquid Crystals, C. W. Woo, K. Feng and **Ping Sheng,** *Liq. Cryst. and Ordered Fluids*, vol. 4, A. C. Griffin and J. F. Johnson, edits. (Plenum Press, N. Y. 1984) p. 653.

55. A Numerical Solution of Coupled Helmholtz Equations Arising from a Diffraction Grating, K. Jordan, G. Richter and **Ping Sheng**, *"Adv. in Compt. Methods for PDE"*, vol. V, R. Vichnevetsky and R. S. Stepleman, edits. (IMAC Publications, N. Y. 1984) p. 309.

56. Effective Dielectric Function of Composite Media, **Ping Sheng**, in *Macroscopic Properties of Disordered Media*, R. Burridge, S. Childress, and G. Papanicolaou, edits. (Springer-Verlag, N. Y. 1981) p. 239.

57. Minimum Metallaic Conductivity in Granular Metal Films, B. Abeles and **Ping Sheng**, *AIP Conference Proc.* 40, 360 (1978).

58. Low-Field and High-Field Hopping Conduction in Granular Metal Films, **Ping Sheng**, *AIP Conference Proc.* 40, 360 (1978).

59. Hopping Conductivity in Granular Disordered Systems, B. Abeles and **Ping Sheng**, in *Amorphous and Liquid Semiconductors*, J. Stuke and W. Brenig, edits. (London: Taylor and Francis, 1974), p. 1321.

60. Application of Two-Point Pade Approximants to Some Solid State Problems, **Ping Sheng**, *Rocky Mountain Journal of Math*. 4, 385 (1974).

61. Electron Localization in Granular Metals, B. Abeles and **Ping Sheng**, *Low Temperature Physics - LT* 13, 3, 578 (1972).

Patents

1. Compact Low-frequency Wave Absorption Device, U.S. Patent No: 12,152,651 B2 (with Z. Dong)

2. Soft Acoustic Boundary Plate, U.S. Patent No: 11,905,703 B2 (with H.Y. Mak, X. Zhang, Z. Dong)

3. Thin Polymer Membrane for Treatment of Saline Water, U.S. Patent No: 11,623,184 B2 (with P. Gao, Q. Gu, Q.H. Zhang, J. Li, R.L. Li)

4. Angstrom-scale Nanowire Arrays in Zeolite, U.S. Patent No: 11,195,634 (with B. Zhang, Z.P. Lai)

5. Acoustic and Vibrational Energy Absorption Metamaterials, Hong Kong Patent No: HK1221061 (with Z.Y. Yang, M. Yang, L. Sun, G.C. Ma, S.W. Xiao)

6. Acoustic Absorption Induced by Hybrid Resonance and Electrical Energy Generation from Sound by Hybrid Resonant Metasurface, Hong Kong Patent No: HK1216447 (with Z.Y. Yang)

7. Sound Attenuating Structures, Hong Kong Patent No: HK1212499 (with ZY Yang)

8. Low Frequency Acoustic Absorption and Soft Boundary Effect with Frequency-Discretized Active Panels, U.S. Patent No: 16/731,376 (with H.Y. Mak, X.N. Zhang, J. Pan, G.C. Ma)

9. All-Liquid Electrorheological Effect, Chinese Patent No. ZL201580016465.9 (with B. Zhang, X.L. Li, S.Y. Chen, W.J. Wen)

10. Active Control of Membrane-Type Acoustic Metamaterial, World Intellectual Property Organization, International Publication Number: WO 2015/039622 A1 (with Z.Y. Yang, M. Yang, S.T. Tang, G.C. Ma and S.W Xiao)

11. Liquid Crystal Alignment Layer and Methods of Making Thereof, U.S. Patent No: 7,968,158 (with H.S. Kwok, O.K.C. Tsui, F.S.Y. Yeung and F.C. Xie)

12. Methods for Producing Carbon Nanostructures, U.S. Patent No: 7,794,684 (with J. Miao and N. Wang)

13. Subwavelength Waveguide and Delay Line with Fractal Cross Sections, U.S. Patent No: 7,567,149 (with C.T. Chan, W.J. Wen, L. Zhou and B. Hou)

14. Membrane Nanopumps Based on Porous Alumina Thin Films, Membranes Therefors and a Method of Fabricating Such Membranes, U.S. Patent No: 7,540,717 (with N. Wang, J. Miao, Z. Yang, S. Yang and X. Zhang)

15. Three-Dimensional H-Fractal Bandgap Materials and Antennas, U. S. Patent No: 7,482,994 (with W.J. Wen and B. Hou)

16. Lithium-ion battery incorporating carbon nanostructure materials, U. S. Patent No: 7,465,519 (with Z.K. Tang, Q. Liang, N. Wang, C.T. Chan)

17. Sound Attenuating Structures, U. S. Patent No: 7,395,898 (with W.J. Wen, Z.Y. Yang and X.X. Zhang)

18. Acoustic Attenuation Materials, U. S. Patent No: 7,249,653 (with C.T. Chan, N. Cue, Z.J. Li, W. J. Wen, X.X. Zhang and M. Tse)

19. Parallel Field Electrode Configurations for Electrorheological Fluid Applications, U. S. Patent No: 7,137,496 (with W.J. Wen)

20. Fluid Suspensions with Electrorheological Effect, U. S. Patent No: 6,984,343 (with W. Wen and S. Yang)

21. Electrorheological Clutch/Brake, U. S. Patent No: 6,942,081 (with W. Wen, K. L. Chan and C. K. Nam)

22. Electrorheological Fluids, U. S. Patent No: 6,852,251 (with W. Wen, C. T. Chan, W. Ge and S. Yang)

23. Bistable Electromagnetic Relay, U. S. Patent No: 6,831,535 (with W. Wen and C. K. Nam)

24. Planar Band Gap Materials, U. S. Patent No: 6,727,863 (with W. Wen, C. T. Chan, W. Ge, L. Zhou and J. Li)

25. Composite Materials with Negative Elastic Constants, U.S. Patent No: 6,576,333 (with R. Xiao, W. Wen and Z. Y. Liu)

26. Method to Reduce Intermodulation Distortion, U.S. Patent No: 4,054,358 (with W. Burke)

27. Optical Playback System Having Increased Depth of Field, U.S. Patent No: 4,179,708 (with A. H. Firester)

28. Polarized Diffractometer for Signal Depth-Width Measurement, U.S. Patent No: 4,236,823 (with R. Roach)

29. Optimal Polarization for the Optical Readout of High Density Video Recording, U.S. Patent No: 4,310,910

30. Solar Cell with Reflecting Grating Substrate, U.S. Patent No: 4,398,056

31. Solar Cell with Two-Dimensional Grating Substrate, U.S. Patent No: 4,493,942 (with R. S. Stepleman)

32. Solar Cell with Hexagonal Grating Substrate, U.S. Patent No: 4,536,608 (with A. N. Bloch)

33. Solar Cell with Correlated Roughness Substrate, U.S. Patent No: 4,683,160 (with A. N. Bloch)

34. Constructing Planar and Three Dimensional Microstructures with a PDMS-Based Conducting Composite, U.S. Patent No: 8,243,358 B2 (with W. J. Wen, X. Z. Niu and L. Y. Liu)

35. Constructing Planar and Three Dimensional Microstructures with a PDMS-Based Conducting Composite, Patent No of the State Intellectual Property Office of the People's Republic of China: ZL2007800434448.X (with W. J. Wen, X. Z. Niu and L. Y. Liu)

36. Lithium-Ion Battery Incorporating Carbon Nanostructure Materials, Chinese Patent No. ZL200510098621.9 (with Z. K. Tang, Q. Liang, N. Wang, C. T. Chan, J. Y. Miao and J. P. Zhai)

37. Constructing Planar and Three Dimensional Microstructures with a PDMS-Based Conducting Composite, Patent No of the Patents Registry Intellectual Property Department, HKSAR: HK1136261 (with W. J. Wen, X. Z. Niu and L. Y. Liu)

38. Acoustic Energy Absorption Metamaterials, U.S. Patent No: 8,579,073 B2 (with Z.Y. Yang, W. J. Wen, J. Mei, G. C. Ma)

39. Acoustic Metamaterial with Simultaneously Negative Effective Mass Density and Bulk Modulus, U.S. Patent No: 8,857,564 (with G. C. Ma, M. Yang, Z. Y. Yang)

40. Acoustic and Vibrational Energy Absorption Metamaterials, U.S. Patent No: 8,960,365 B2 (with Z. Y. Yang, M. Yang, L. Sun, G. C. Ma, S.W. Xiao)