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EDUCATION AND EXPERIENCE:

Ph.D. Physics	Princeton University	2005
M.S. Quantum optics	Jilin University, China	2000
B.S. Physics	Jilin University, China	1997

PROFESSIONAL APPOINTMENTS:

San Francisco State University	Associate Professor	2014-present
San Francisco State University	Assistant Professor	2008-2014
New York University, Physics Dept.	Assistant Research Scientist	2007-2008
Princeton University, Chem. Eng. Dept.	Visiting Research Collaborator	2007-2008
Princeton University, Chem. Eng. Dept.	Research Associate	2005-2007
Princeton University, Physics Dept.	Research/Teaching Assistant	2000-2005

GRANTS AND

National Science Foundation, Major Research Instrumentation Award (#1530978)	2015
National Science Foundation, Research Grant (DMR 1308084)	2013
American Chemical Society Petroleum Research Fund Award (#52644-UR6)	2012
SFSU, President's Sabbatical Award	2012
SFSU, Provost's Research Time Award	2011
National Science Foundation, Major Research Instrumentation Award (# 1040444)	2010
SFSU, Facilitating Research and Creative Activity ORSP Internal Award	2010
Research Corporation, Cottrell College Science Awards (#10626)	2009
Kirtland Manley '31 Merit Fellowship, Princeton University	2001-2002
President's Fellowship, Princeton University	2000-2001
First class Master's thesis award, Jilin University, China	2000
Graduated with honor, Physics Department, Jilin University, China	1997
Gifted Youth Undergraduate Program, Jilin University, China	1993-1997

Selected Peer-Reviewed Journal Publications:

1. *Unfolding the band structure of non-crystalline photonic band gap materials*
Samuel Tsitrin*, Eric Williamson*, Timothy Amoah, Geev Nahal*, Ho Chan*, Marian Florescu and Weining Man^C
Scientific Reports (accepted 2015)
2. *Giant tunable self-defocusing nonlinearity and dark soliton attraction observed in m-cresol/nylon thermal solutions*
Valton Smith*, Brian Leung*, Phillip Cala*, Zhigang Chen, and Weining Man^C
Optical Materials Express, Vol. 4, Issue 9, pp. 1807-1812 (2014)
3. *Using microwave and macroscopic samples of dielectric solid to study the photonic properties of disordered photonic bandgap materials*
Seyed Reza Hashemizad*, Sam Tsitrin*, Yingquan He*, Polin Yadak*, Daniel Cuneo*, Eric Paul Williamson*, Devin Liner*, Weining Man^C

- J. VIS. EXP.** **91**, e51614, doi:10.3791/51614 (2014)
4. *Isotropic Band Gaps and Freeform Waveguides Observed in Hyperuniform Disordered Photonic Solids.*
Weining Man^C, Marian Florescu, Eric Williamson*, Yingquan He*, Seyed Hashemizad*, Brian Leung*, Devin Liner*, Salvatore Torquato, and Paul Chaikin, Paul Steinhardt^C
PROC. NATL. ACAD. SCI. **110** 4015886-15891 (2013)
 5. *Photonic band gap in isotropic hyperuniform disordered solids with low dielectric contrast.*
Weining Man^C, Marian Florescu, , Kazue Matsuyama*, Polin Yadak*, Geev Nahal*, Seyed Hashemizad*, Eric Williamson*, Paul Steinhardt, Salvatore Torquato, and Paul Chaikin
OPT. EXPRESS **21** 17, 19972-19981 (2013)
 6. *Interactions between self-channeled optical beams in soft-matter systems with artificial nonlinearities.*
 Shima Fardad*, Matthew S. Mills, Peng Zhang*, Weining Man, Zhigang Chen, and Demetrios N. Christodoulides^C **OPT. LETT.**, **38** 18 3585-3587 (2013)
 7. *Engineered optical nonlinearities and enhanced light transmission in soft-matter systems with tunable polarizabilities,*
Weining Man, Shima Fardad*, Ze Zhang*, Jai Prakash*, Michael Lau*, Peng Zhang*, Matthias Heinrich, Demetrios N. Christodoulides, and Zhigang Chen^C **PHYS. REV. LETT.**, **111**, 218302 (2013)
 8. *Self-Organized Criticality in Sheared Suspensions.*
 Laurent Corté, Sharon J. Gerbode, Weining Man, David J. Pine^C
PHYS. REV. LETT. **103** 248301 (2009)
 9. *Direct measurements of critical stresses and cracking in thin films of colloid dispersions*
W. Man and W. B. Russel, **PHYS. REV. LETT.** **100** 198302 (2008)
 10. *A generalized Hertzian model for the deformation and cracking of close-packed colloidal arrays saturated with liquid*
 W. B. Russel, N. Wu, and W. Man, **LANGMUIR** **24** (5) 1721 (2008)
 11. *Some Observations on the Random Packing of Hard Ellipsoids*
 P. M. Chaikin, A. Donev, W. Man, F. H. Stillinger and S. Torquato, **INDU. ENG. CHEM. RES.** **45** 6960 (2006)
 12. *Experiments on Random Packings of Ellipsoids*
W. Man, A. Donev, F. H. Stillinger, M. Sullivan, W. B. Russel, D. Heeger , S. Inati, S. Torquato and P. M. Chaikin, **PHYS. REV. LETT.** **94** 198001 (2005)
 13. *Measurements of Photonic Gaps in Icosahedral Quasicrystals*
W. Man, M. Megens, P. Steinhardt, P. M. Chaikin, **NATURE** **436** 993 (2005)

Peer-reviewed proceedings and conference presentations

1. *Hyperuniform disordered photonic bandgap materials, from microwave to infrared wavelength regime.* Weining Man, Invited talk for APS March Meeting 2016
2. *Novel Silicon Waveguides and Modulators Via Hyperuniform Disordered Platforms*
 Weining Man, Milan Milosevic, Geev Nahal*, Timothy Amoah, Paul Steinhardt, Salvatore Torquato, Ruth Ann Mullen, Marian Florescu, in Opto Electronics and Communications Conference (**OECC**) (2015)
3. *Fabrication and optimization for waveguides in sub-micron scale hyperuniform disordered photonic bandgap materials*

- Sam Tsitrin*, Marian Florescu, Milan Milošević, Geev Nahal*, Ruth A. Mullen, Paul Steinhardt, Sal Torquato, Paul Chaikin, and Weining Man, in Conference on Lasers and Electro-Optics (CLEO) and the Quantum Electronics and Laser Science Conference (QELS), paper SM4M.5 (2014)
4. *Dark Soliton Attraction and Optical Spatial Shock Waves Observed in M-cresol/Nylon Solutions*
Valton Smith*, Phillip Cala*, Zhigang Chen, and Weining Man, in Conference on Lasers and Electro-Optics (CLEO) and the Quantum Electronics and Laser Science Conference (QELS), paper FW3D.1(2014)
 5. *Hyperuniform disordered photonic band gap devices for silicon photonics*, Milan Milosevic, Marian Florescu, Weining Man, Geev Nahal*, Sam Tsitrin*, Timothy Amoah, Paul Steinhardt, Salvatore Torquato, Paul Chaikin, Ruth Ann Mullen, Group IV Photonics (GFP), 2014 IEEE 11th International Conference on, Page(s):33 - 34 Print ISBN:978-1-4799-2282-6 INSPEC Accession Number:14760956, Paris, 2014,
 6. *Silicon waveguides and filters in hyperuniform disordered photonic solids for the near-infrared*
Milan Milosevic, Marian Florescu, Weining Man, Paul Steinhardt, Salvatore Torquato, Paul Chaikin, Timothy Amoah, Geev Nahal*, and Ruth Ann Mullen, in Optical Fiber Communication Conference, paper Tu3E.6 (2014)
 7. *Isotropic band gaps, optical cavities, and freeform waveguides in hyperuniform disordered photonic solids*,
Marian Florescu, Weining Man, Ruth Ann Mullen, Milan M. Milosevic, Timothy Amoah, Paul M. Chaikin, Salvatore Torquato, Paul Steinhardt, in Active Photonic Materials VI, Proceedings of SPIE Vol. 9162 (SPIE, Bellingham, WA 2014), 91620G.
 8. *Hyperuniform disordered photonic band gap silicon devices for optical interconnects*
Milan M. Milosevic, Marian Florescu, Weining Man, Geev Nahal*, Sam Tsitrin*, Timothy Amoah, Paul J. Steinhardt, Salvatore Torquato, Paul M. Chaikin, Ruth Ann Mullen
IEEE Optical Interconnects Conference (OI); (2014)
 9. *Freeform wave-guiding at infrared regime in two dimensional disordered photonic bandgap materials*
Geev Nahal*, Marian Florescu*, Ruth Ann Mullen*, Paul Steinhardt, Salvatore Torquato, Paul Chaikin, Weining Man, in **Frontiers in Optics**, OSA's Annual meeting, paper FW5E.3 (2013)
 10. *New Designer Dielectric Metamaterials with Isotropic Photonic Band Gap*
Geev Nahal*, Weining Man, Marian Florescu, Paul J. Steinhardt, Sal Torquato, Paul M. Chaikin, and Ruth Ann Mullen, in **IEEE Photonics Conference**, paper WE4.2 (2013)
 11. *Observation of Strong Tunable Self-defocusing Nonlinearity in M-cresol/Nylon Thermal Solutions*
Valton Smith, Brian Y. Leung, Zhigang Chen, and Weining Man, in Conference on Lasers and Electro-Optics (CLEO) and the Quantum Electronics and Laser Science Conference (QELS), paper JW2A.48 (2013)
 12. *Formation and interaction of self-guided optical beams in a pre-engineered soft-matter system*
Shima Fardad*, Matthew Mills, Peng Zhang, Zhigang Chen, Demetrios N.Christodoulides, and Weining Man, in Conference on Lasers and Electro-Optics

- (CLEO) and the Quantum Electronics and Laser Science Conference (QELS), paper CM3H.1 (2013)
13. *Freeform wave-guiding and tunable frequency splitting in isotropic disordered photonic band gap materials*
Weining Man, Yingquan He*, Brian Y. Leung*, Samuel Tsittrin*, Marian Florescu, Paul J. Steinhardt, Sal Torquato, and Paul M. Chaikin, in **Frontiers in Optics**, OSA's Annual meeting, paper FTh2G.5 (2012)
 14. *Cavity Modes Study in Hyperuniform Disordered Photonic Bandgap Materials*
 Samuel Tsittrin*, Yingquan He*, Samuel Hewatt*, Brian Y. Leung*, Marian Florescu, Paul Steinhardt, Sal Torquato, Paul M. Chaikin, and Weining Man, in **Frontiers in Optics**, OSA's Annual meeting, paper FTh3F.4 (2012)
 15. *Experimental demonstration of guiding, bending, and filtering of electromagnetic wave in disordered photonic band gap materials*
Weining Man, Marian Florescu, Seyed Hashemizad*, Yingquan He*, Brian Leung*, Eric Williamson, and Paul Chaikin, in Conference on Lasers and Electro-Optics (CLEO) and the Quantum Electronics and Laser Science Conference (QELS), paper QW3H.2 (2012)
 16. *Observation of self-induced transparency in nano-suspensions with negative polarizability*
 Mike Lau*, Ze Zhang*, Weining Man, Jai Prakash*, Peng Zhang*, Demetrios N. Christodoulides, and Zhigang Chen, in Conference on Lasers and Electro-Optics (CLEO) and the Quantum Electronics and Laser Science Conference (QELS), paper QW3E.5 (2012)
 17. *Specular amorphous photonic bandgap lattices*
 Peng Zhang*, Peigen Ni*, Xinyuan Qi, Weining Man, Zhigang Chen, Jianke Yang, Mikael Rechtsman, and Mordechai Segev, in Conference on Lasers and Electro-Optics (CLEO) and the Quantum Electronics and Laser Science Conference (QELS), paper QW3H.1 (2012)
 18. *Observation of Self-Trapping of Light in "Air-Bubble" Type Nonlinear Nano-Suspensions*, Jai Prakash*, Weining Man, Ze Zhang*, Peng Zhang*, Demetrios Christodoulides, Zhigang Chen, **Frontiers in Optics**, Optical Society of America's Annual meeting, paper FThA7 (2011)
 19. *Observation of Localized Modes in Optically Induced Disordered Lattices*, Peigen Ni*, Peng Zhang*, Weining Man, Jianke Yang, Zhigang Chen, **Frontiers in Optics** (2011), Optical Society of America's Annual meeting, paper FWAA1 (2011)
 20. *Experimental observation of photonic bandgaps in hyperuniform disordered material*
Weining Man, Marian Florescu, Kazue Matsuyama, Polin Yadak, Sal Torquato, Paul J. Steinhardt, and Paul M. Chaikin, in Conference on Lasers and Electro-Optics (CLEO) and the Quantum Electronics and Laser Science Conference (QELS), paper CThS2 (2010)

Non peer-reviewed conference presentations

1. Some observations on hyperuniform disordered photonic bandgap materials, from microwave scale study to infrared scale study
 Sam Tsittrin, Geev Nahal, Marian Florescu, Weining Man **APS March Meeting** (2015)
2. Experimental demonstration waveguide with arbitrary bending angles in hyperuniform disordered photonics materials
 Weining Man, Marian Florescu, Seyed Hashemizad*, Eric Williamson, Devin Liner*, Yingquan He*, Brian Leung*, Paul Chaikin **APS March Meeting** (2012)

3. *Measurement of photonic band diagram in non-crystalline photonic band gap (PBG) materials*, Weining Man , Eric Williamson*, Seyed Hashemizad*, Polin Yadak* , Marian Florescu, **APS March Meeting** (2011)
4. *Experimental observation of photonic bandgaps in two dimensional hyperuniform disordered materials*, Seyed Hashemizad* , Weining Man , Marian Florescu , Polin Yadak* , Kazue Matsuyama* , Salvatore Torquato , Paul Steinhardt , Paul Chaikin, **APS March Meeting** (2011)
5. *Disordered Hyperuniform Photonic Band Gap Materials*
Marian Florescu, Weining Man, Paul M. Chaikin, Sal Torquato, Paul J. Steinhardt, **APS March Meeting** (2011)

Patents

1. Assembly of Quasicrystalline Photonic Heterostructures
David G. Grier, Yael Roichman, Weining Man, Paul Chaikin & Paul. J. Steinhardt,
US Patent No. 7981774 issued July 19, 2011
US Patent No. 8394708 issued March 12, 2013
2. Quasicrystalline Photonic Heterostructures and Uses Thereof
Weining Man, Paul Chaikin and Paul. J Steinhardt
US Patent No. 8064127 issued November 22, 2011.
US Patent No. 8243362 B1 issued August 14, 2012.
US Patent No.8508838 B2 issued August 13, 2013.
US Patent No.TBA B3 approved August 23, 2013.

Work Featured / Reviewed in News and Professional Publications:

1. *Researchers steer light in new directions* (2013)
<http://phys.org/news/2013-09-researchers-steer-light-in-new.html>
2. *Light Steered in New Directions: 2-D Material Could Lead to Shaped, Wavy, Curved, and Sharply Bending Ways to Steer Light* (2013)
<http://www.sciencedaily.com/releases/2013/09/130916162009.htm>
3. *Scientists Control Light with 2-D Photonic Band Gap Material* (2013)
<http://www.scienceworldreport.com/articles/9523/20130917/scientists-control-light-2-d-photonic-band-gap-material.htm>
4. *SF State researchers steer light in new directions* (2013)
<http://esciencenews.com/articles/2013/09/16/sf.state.researchers.steer.light.new.directions>
5. *Forbidden light*, by A. Jenkins, **NATURE PHYSICS**, (Aug. 18 2005)
6. *Photonic crystals move into new areas*, by B. Dumé, **PHYSICS WORD**, (Aug. 17 2005)
7. *Model photonic quasicrystals: Optical materials*, by M. Telford, **MATERIALS TODAY**, **8**, (10) 13 (2005)
8. *Quasicrystals step out of the shadows*, by M. Peach, **MATERIALS TODAY**, **9**, (7) 44 (2006)

Previously published Peer-Reviewed Journal Publications:

1. *Probe amplification from Raman gain to inversionless gain*
P. Dong, W. Man, JY Gao, **PHYS. LETT. A** **265** (1-2): 43-51 (2000)
2. *Inversionless gain without incoherent pumping*
P. Dong, W. Man, JY Gao, **LASER PHYS.** **11** (11): 1158-1166 NOV (2001)
3. *Amplification without inversion with two coherent coupling lasers in a four-level atom*

- P. Dong, S. Tang, W. Man, JY Gao, **MOL. OPT. PHYS.** **34** 2851-2867 (2001)
4. *Effect of anti-cancer medicament on the validity of a fluorescence-based technique for cancer diagnosis*
R. Zheng, X. Guo, J. Wang, W. Man, R. Wang, J. Meng, PROC. SPIE Vol. 4916, p. 53-57, **Optics in Health Care and Biomedical Optics: Diagnostics and Treatment**, Britton Chance; Mingzhe Chen; Gilwon Yoon; Eds. (2002)
 5. *Time delay properties of a Fabry-Perot interferometer*,
S. Yuan, W. Man, J. Yu JY Gao, **CHINESE PHYS. LETT.** **18** (3): 364-366 MAR (2001)

Previously presented invited talks and conference proceedings:

1. *Geometry and Symmetry in Experimental Condensed Matter Physics*, Invited Colloquium, UCSC (2008)
2. *Geometry and Symmetry in Photonics and Materials Science*, Invited LASSP Seminar, Cornell University (2008)
3. *Geometry and Symmetry in Photonics and Material Science*, Invited Seminar, Brown University, Institute for Molecular and Nanoscale Innovation (2008)
4. *Geometry and Symmetry in Experimental Condensed Matter*, Invited Seminar, Tufts University (2008)
5. *Critical stresses and cracking in thin films of colloidal dispersions*,
W. Man, W. B. Russel and N. Wu, 81st ACS Colloid and Surface Science Symposium, (2007)
6. *Critical stresses and cracking in thin films of colloidal dispersions*,
W. Man and W. B. Russel, APS March Meeting (2007)
7. *Calculations of the Photonic Properties of Two Dimensional quasiCrystals*,
W. Man, O. Crisafulli, P. Chaikin, P. Steinhardt, APS March Meeting (2006)
8. *Experimental measurement of the photonic properties of icosahedral quasicrystals*,
W. Man invited speaker for Condensed Matter Physics Seminar at Princeton University (2005)
9. *Two-dimensional order-disorder (melting) transition in a diblock copolymer cylinder-forming thin-film system*,
W. Man, D. E. Angelescu, V. Pelletier, M. W. Wu, D. H. Adamson, R. A. Register, P. M. Chaikin, APS March Meeting (2005),
10. *Experiments on Random Packings of Ellipsoids*,
W. Man, A. Donev, F. H. Stillinger, M. Sullivan, W. B. Russel, D. Heeger, S. Inati, S. Torquato and P. M. Chaikin. APS March Meeting, (poster) (2005),
11. *Experiments on 3D and calculations on 2D photonic quasicrystals*,
W. Man, M. Mischa, P. Chaikin, P. Steinhardt, APS March Meeting (2004),
12. *Jammed Ellipsoids Beat Jammed Spheres*,
P. Chaikin, A. Donev, W. Man, I. Cisse, F. Stillinger, S. Torquato, APS March Meeting (2004),
13. *Microwave Study of Photonic bands and gaps in model 3D crystals and quasi-crystals*.
W. Man, O. Crisafulli, P. Chaikin, P. Steinhardt, APS March Meeting (2003)