

## Oleg Gang

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### Professional Preparation

Harvard University, Cambridge, MA	Postdoctoral Rothschild Fellow 2000-2002
Bar-Ilan University, Israel	Soft Matter Physics with Highest Distinction; Ph.D. 2000
Bar-Ilan University, Israel	Physics; M.Sc. 1994

### Appointments

2016-present *Professor*, Department of Chemical Engineering, and Department of Applied Physics and Applied Mathematics, Columbia University, NY

2008-present *Leader* for Soft Matter and Biomaterials Theme, Center for Functional Nanomaterials at Brookhaven National Laboratory (BNL), Upton, NY

2004-present *Scientist*, Center for Functional Nanomaterials, BNL, Upton, NY

2002- 2004 *Goldhaber Fellow*, Physics Department, BNL, Upton, NY

### Synergetic Activities

Panelist for DOE and DOD strategic workshop; Reviewer for NSF, DOE, DOD, Petroleum foundations, various European Science foundations, Binational Science foundations, and others;

Chaired sessions at APS and MRS meetings, Gordon conference and specialized conferences

Co-organized 15 conferences and workshops

### Selected Relevant Publications

Full list at <https://scholar.google.com/citations?user=aYHtwgYAAAAJ&hl=en>

1. S. Srivastava, M. Fukuto, and O. Gang, Liquid Interfaces with pH-switchable Nanoparticle Arrays, *Soft Matter*, 14, 3929 – 3934 (2018).
2. Tian, C., Cordeiro, M. A. L., Lhermitte, J., Xin, H. L. L., Shani, L., Liu, M. Z., Ma, C. L., Yeshurun, Y., DiMarzio, D. & Gang, O. Supra-Nanoparticle Functional Assemblies through Programmable Stacking. *ACS Nano* 11, 7036-7048, doi:10.1021/acsnano.7b02671 (2017).
3. Wenyan Liu, Miho Tagawa, Huolin Xin, Tong Wang, Hamed Emamy, Huilin Li, Kevin G. Yager, Francis W. Starr, Alexei V. Tkachenko, and Oleg Gang, “Diamond Family of Nanoparticle Superlattices”, *Science* 351, 6273, 582 (2016)
4. Ye Tian, Tong Wang, Yugang Zhang, Huilin Li and Oleg Gang “Lattice Engineering via Nanoparticle-DNA Frameworks”, *Nature Materials*, (2016)

5. Yugang Zhang, Babji Srinivasan, Thi Vo, Suchetan Pal, Sanat Kumar, and Oleg Gang, "Selective Re-Programming Transforms Nanoparticle Superlattices", *Nature Materials*, 14, 840-847 (2015)
6. Ye Tian, Tong Wang, Wenyan Liu, Huolin L. Xin, Hualin Li, Yonggang Ke, William M. Shih, and Oleg Gang "Prescribed nanoparticle cluster architectures and low-dimensional arrays built using octahedral DNA origami frames", *Nature Nanotechnology*, 10, 637–644(2015)
7. Fang Lu, Kevin G. Yager, Yugang Zhang, Huolin Xin and Oleg Gang "Superlattices assembled through shape-induced directional binding", *Nature Communications*, 6, 6912 (2015)
8. Vo, T., Venkatasubramanian, V., Kumar, S., Srinivasan, B., Pal, S., Zhang, Y. & Gang, O. Stoichiometric control of DNA-grafted colloid self-assembly. *PNAS*, 112, 4982-4987, (2015).
9. Y. Zhang, F. Lu, K. G. Yager, D. van der Lelie, and O. Gang "A general strategy for the DNA-mediated self-assembly of functional nanoparticles into heterogeneous systems", *Nature Nanotechnology*, 8, 865 (2013)
10. D. Nykypanchuk, M. M. Maye, D. van der Lelie, and O. Gang, "DNA-guided crystallization of colloidal nanoparticles", *Nature* 451, 549 (2008) (featured on the cover).

### **Identification of Potential Conflicts of Interest or Bias in Selection of Reviewer:**

#### Collaborators and Co-editors:

Y. Ke (Emory U), K. Yager (BNL), W. Shi (Harvard), F. Starr (Wesleyan), E. Kumacheva (Toronto U), Tkachenko (BNL), F. Sciortino (U of Rome). H. Xin (UC at Irvine), H. Liu (van andel Institute), A. Kanaras (U. of Southampton), S. Kumar (Columbia)

#### Graduate and Postdoctoral Advisors and Advisees:

PhD advisor: M. Deutsch (Bar-Ilan U)

Postdoc advisor: P. Pershan (Harvard)

#### Thesis Advisor & Post-Doctoral Scholar Sponsor:

Cheng Chi (IBM), Ye Tian (Nanjing U), Dmytro Nykypanchuk (BNL), Mathew Maye (Syracuse U), Huiming Xiong (Jiao Tong U), Cheng Tian (Pharma), Andrea Stadler (St. Josef College), S. K. Li (Samsung), Kumara Mudalige (FDA), Fang Lu (BNL), Dazhi P. Sun (South University of Science and Technology of China), Sunita Srivastava (ITT, Mumbai), Yugang Zhang (BNL), Suchetan Pal (Memorial Sloan Kettering Cancer Center), Wenyan Liu (Missouri U. of Science and Technology)

#### Advisory Committees:

- DOE funded the Energy Frontier Research Center for the Science of Synthesis Across Scales at University of Washington, 2018-
- Binational Science Foundation, 2018-
- NSF funded Center for Interface Design and Engineered Assembly of Low Dimensional System at City College of New York, 2017-