CURRICULUM VITAE

Enlai Gao

Ph. D Candidate, Center for Nano and Micro Mechanics, Department of Engineering Mechanics, Tsinghua University, Email: [enlaigao@gmail.com](mailto:enlaigao@gmail.com)

**RESEARCH INTERESTS**

Combining experimental measurements with multi-level modeling techniques, such as Finite Element Method (FEM), Phase Field, Molecular Dynamics Simulation and First Principle Calculation, understand the nano and micro-mechanics of materials at the atomic level, and guide the design and synthesis of advanced materials.

**EDUCATION**

09/2013 - 06/2018 Ph. D in Solid Mechanics, Tsinghua University

09/2016 - 03/2017 Visiting Student, University of Texas at Dallas

09/2009 - 07/2013 B. S. in Engineering Mechanics, China Agricultural University

**PUBLICATIONS:**

[1] **E. Gao** *et al.*, Optimizing interfacial crosslinking in graphene-derived materials, which balances intralayer and interlayer load transfer, **ACS Applied Materials & Interfaces** 9 (29), 24830–24839 (2017)

[2] **E. Gao** *et al.*, Intrinsic mechanical properties of graphene oxide films: Strain characterization and the gripping effects, **Carbon** 118, 467-474 (2017)

[3] **E. Gao** *et al.*, Two-dimensional silica: Structural, mechanical properties, and strain-induced band gap tuning, **Journal of Applied Physics** 119 (1), 014301 (2016)

[4] **E. Gao** *et al.*, Thin-shell thickness of two-dimensional materials, **Journal of Applied Mechanics** 82 (12), 121012 (2015)

[5] **E. Gao** *et al.*, Fabricating highly ordered nanofiber assemblies by controlled shear flow and solvent evaporation, **arXiv:1603.07473** (in submission)

[6] S. Deng, **E. Gao** *et al.*, Confined, oriented and electrically anisotropic graphene wrinkles on bacteria, **ACS Nano** 10 (9), 8403-8412 (2016)

[7] B. Luo, **E. Gao** *et al.*, Etching-controlled growth of graphene by chemical vapor deposition, **Chemistry of Materials** 29 (3), 1022-1027 (2017)

[8] S. Deng, **E. Gao** *et al.*, Adhesion energy of MoS2 thin films on silicon-based substrates determined via the attributes of a single MoS2 wrinkle, **ACS Applied Materials & Interfaces** 9 (8), 7812-7818 (2017)

[9] H. Wang, **E. Gao** *et al.*, Facile growth of vertically-aligned graphene nanosheets via thermal CVD: The experimental and theoretical investigations, **Carbon** 121, 1-9 (2017)

[10] G. Wang, **E. Gao** *et al.*, Degradation and thermally assisted recovery of graphene/polymer nano-interfaces under cyclic mechanical loading, **Composites Science and Technology** 149, 220-227, (2017)

[11] D. Geng, **E. Gao** *et al.*, Large-area growth of five-lobed and triangular graphene grains on textured Cu substrate, **Advanced Materials Interfaces** 3 (18), 1600347 (2016)

[12] C. Wang, **E. Gao** *et al.*, Mechanics of network materials with responsive crosslinks, **Comptes Rendus Mecanique** 342, 264-272 (2014)

[13] S. Kim *et al.*, harvesting electrical energy from carbon nanotube yarn twist, **Science** 357 (6353), 773-778 (2017)

[14] C. Wang, X. Li, **E. Gao** *et al.*, Carbonized silk fabric for ultrastretchable, highly sensitive and wearable strain sensors, **Advanced Materials** 28 (31), 6640-6648 (2016)

[15] D. Geng, L. Meng, B. Chen, **E. Gao** *et al.*, Controlled growth of single-crystal twelve-pointed graphene grains on liquid Cu surface, **Advanced Materials** 26 (37), 6423-6429 (2014)

[16] S. Liu, J. Li, X. Shi, **E. Gao** *et al.*, Rollerball-pen-drawing technology for extremely foldable paper-based electronics, **Advanced Electronic Materials** 3 (7), 1700098 (2017)