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个人介绍：

高华健，德国马普金属所所长，教授，力学、材料学专家。1963年于西安交通大学获学士学位，1984、1988年在哈佛大学分别获得工学硕士、博士学位，导师为James R. Rice 教授。1988年受聘于斯坦福大学，任助理教授；1994年晋升为副教授并获终身职位；2000年晋升为教授。2001年加入马普学会，任马普金属所教授、所长。他在薄膜及其它材料体系的微观力学、计算模拟等领域做出了重要贡献。曾获得多项学术奖励；发表论文100余篇；是三种国际学术期刊的编委；与美国、欧洲及中国的科学家有着密切的合作关系。是材料微观力学、生物材料、材料计算等方面国际知名学者。

代表性论文如下：

1. H. Gao, "Some General Properties of Stress-Driven Surface Evolution in a Heteroepitaxial Thin Film Structure", 1994, Journal of the Mechanics and Physics of Solids, 42, pp. 741-772.
2. H. Gao, "A Theory of Local Limiting Speed in Dynamic Fracture," 1996, Journal of the Mechanics and Physics of Solids, Vol. 44, pp. 1453-1474
3. H. Gao, T.-Y. Zhang and P. Tong, "Local and Global Energy Release Rates for an Electrically Yielded Crack in a Piezoelectric Ceramic," 1997, Journal of the Mechanics and Physics of Solids, Vol. 45, pp. 491-510.
4. H. Gao, "Elastic Waves in a Hyperelastic Solid Near Its Plane Strain Equibiaxial Cohesive Limit," 1997, Philosophical Magazine Letters, Vol. 76, pp. 307-314.
5. C. S. Ozkan, W. D. Nix and H. Gao, "Strain Relaxation and Defect Formation in Heteroepitaxial Si_{1-x}Gex Films Via Surface Roughening Induced by Controlled Annealing Experiments", 1997, Applied Physics Letters, 70, pp. 2247-2249.
6. H. Gao and P. Klein, "Numerical Simulation of Crack Growth in an Isotropic Solid With Randomized Internal Cohesive Bonds," 1998, Journal of the Mechanics and Physics of Solids, Vol. 46, pp. 187-218.
7. H. Gao and W. D. Nix, "Surface Roughening of Heteroepitaxial Thin Films," 1999, Annual Review of Materials Science, Vol. 29, pp. 173-209.
8. H. Gao, Y. Huang, P. Gumbsch and A. J. Rosakis, "On Radiation-Free Transonic Motion of Cracks and Dislocations," 1999, Journal of the Mechanics and Physics of Solids, Vol. 47, pp. 1941-1961.
9. P. Gumbsch and H. Gao, "Dislocations Faster Than the Speed of Sound," 1999, Science, 283, No. 5404, pp. 965-968.
10. H. Gao, C. S. Ozkan, W. D. Nix, J. A. Zimmerman and L. B. Freund, "Atomistic Models of Dislocation Formation at Crystal Surface Ledges in in Si_{1-x}Gex /Si(100) Heteroepitaxial Thin Films," 1999, Philosophical Magazine A, 79, pp. 349-370.
11. H. Gao and W. D. Nix, "Surface Roughening of Heteroepitaxial Thin Films," 1999, Annual Review of Materials Science, 29, pp. 173-209.
12. H. Gao, L. Zhang, W. D. Nix, C. V. Thompson, E. Arzt, "Crack-Like Grain Boundary Diffusion Wedges in Thin Metal Films", 1999, Acta Materialia, 47, pp. 2865-2878.

13. T. Bai, D.D. Pollard and H. Gao, ``Explanation for Fracture Spacing in Layered Materials,'' 2000, Nature, Vol. 403, No. 6771, pp. 753–756.
14. F. F. Abraham and H. Gao, ``How Fast Can Cracks Propagate?'' 2000, Physical Review Letters, Vol. 84, pp. 3113–3116.
15. H. Gao and Y. Huang, ``Taylor-Based Nonlocal Theory of Plasticity,'' 2001, International Journal of Solids and Structures, vol. 38, pp. 2615–2637.
16. H. Gao, Y. Huang and F. F. Abraham, ``Continuum and atomistic studies of intersonic crack propagation,'' 2001, Journal of the Mechanics and Physics of Solids, vol. 49, pp. 2113–2132.
17. P.A. Klein, J.W. Foulk, E.P. Chen, S.A. Wimmer and H. Gao, ``Physics-based modeling of brittle fracture: cohesive formulations and the application of meshfree methods,''' 2001, Theoretical and Applied Fracture Mechanics, Vol. 37, pp. 99–166.
18. D. Josell, T.P. Weihs, H. Gao, ``Diffusional creep: Stresses and strain rates in thin films and multilayers,''' 2002, MRS Bulletin, 27, 39–44.

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