Erratum: Ideal Brittle Fracture of Silicon Studied with Molecular Dynamics [Phys. Rev. Lett. 80, 746 (1998)]

Dominic Holland and M. Marder

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In our Letter we stated that we used Stillinger-Weber potentials in our simulations. The statement is incorrect. Our potentials are of the Stillinger-Weber form but the parameter λ, a coefficient governing the stiffness of angle-dependent forces, should have had the value $\lambda = 21$, while we used $\lambda = 42$. One consequence of increasing λ is that the melting temperature of silicon increases to approximately 3500 K, while the correct value is 1683 K. Upon reducing λ to the correct value, cracks in Stillinger-Weber silicon emit blunting dislocations and refuse to move further until given an energy on the order of 4 times the experimentally known value. With $\lambda = 42$ the phenomenology of fracture agrees with experiment. Neither the Stillinger-Weber potential nor our modification can be regarded as giving a satisfactory description of fracture.

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