Monte Carlo Simulation of Wet Chemical Etching of Silicon

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The aim of this paper is to demonstrate that Monte Carlo simulation can be a powerful tool to understand wet chemical etching of silicon. We have performed Monte Carlo simulations of etching of three important silicon surfaces: Si(111), Si(100) and Si(110). Interpretation of these simulations yields an understanding of the micromorphology of etched silicon surfaces and the orientation dependence of the etch rate.