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**Apex Exponents for Polymer-Probe Interactions** ROYA ZANDI, UCLA, MICHAEL SLUTSKY, MEHRAN KARDAR, MIT, YACOV KANTOR, Tel Aviv University — We consider self-avoiding polymers attached to the tip of an impenetrable probe. The scaling exponents $\gamma_1$ and $\gamma_2$, characterizing the number of configurations for the attachment of the polymer by one end, or at its midpoint, vary continuously with the tip's angle. These apex exponents are calculated analytically by $\epsilon$-expansion, and numerically by simulations in three dimensions. We find that when the polymer can move through the attachment point, it typically slides to one end; the apex exponents quantify the entropic barrier to threading the eye of the probe.

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