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Drop Impact on Hairy Surfaces ALICE NASTO, ANETTE HOSOI, Massachusetts Institute of Technology — Using a combination of experiments and theory, we investigate the effect of a millimeter-scale hairy texture on impact of liquid drops. By varying the speed of the drop at impact and the spacing of the hairs, we observe a variety of behaviors. For dense hairs and low impact velocity, the liquid drop sits on top of the hair, similar to a Cassie-Baxter state. For higher impact velocity, and intermediate to high density of hairs, the drops penetrate through the surface, but the hairs resist their spreading. For low hair density and high impact velocity, the drops impact and splash.

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