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Electrostatically-driven precursor films SEYED REZA MAHMOUDI, KRIPA K. VARANASI, MIT — Here, we report a new class of electrostatically assisted precursors containing microscopic charged particles. This precursor manifests itself as the late stage of forced-spreading of a macroscopic dielectric film subjected to a unipolar ionic bombardment in a gas containing particulates. We put a model forward to predict dynamic behaviour of this electrostatic precursor dynamics. The spreading of the precursor film is predicted to be proportional to the square root of exposure time, which is consistent with the ellipsometric measurements.

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