Abstract Submitted
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**Controlled deposition of drops on edible film using an AC-electric field**[1] YUEYANG SHEN, New Jersey Institute of Technology, JOHN BRYNDZA, The College of New Jersey, SHILAN MOTAMEDVAZIRI, BORIS KHUSID, New Jersey Institute of Technology — We present a drop-based technique for the deposition of drug dosages onto an edible film. Unlike the common approach to utilize DC electric fields and metal nozzles, we use a nozzle made of an electrically insulating material and apply an AC electric field to form drops. Experiments were conducted on polyethylene glycol (PEG)-based solutions over a broad range of the applied frequency and the applied peak-to-peak voltage. Presented results demonstrate the various drop formation regimes observed as a function of the field strength and frequency. We discuss the mechanism of the drop formation in an insulating nozzle caused by the application of an AC field.

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