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**Electrical Power Generation by Mechanically Modulating Electrical Double Layers** DONGYUN LEE, JONG KYUN MOON, JAEKI JEONG, HYUK KYU PAK, Department of Physics, Pusan National University, Busan 609-735, Korea — Many objects in contact with a liquid acquire some electronic charges on their surfaces. These charges on the surface attract counter ions from the liquid phase. This complex system is called electrical double layer (EDL). Since its geometry and structure is similar to an electric capacitor, it is also called an electrical double layer capacitor (EDLC). In this work we studied two EDLCs formed in a liquid droplet bridge between two parallel solid conducting plates. We found that when the bridge height was mechanically modulated, each EDLC was continuously charged and discharged generating an AC electric current across the plates. The results of this experiment can be useful for constructing a micro-fluidic power generation.

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