



Switchable power generation in triboelectric nanogenerator enabled by controlled electrostatic discharge

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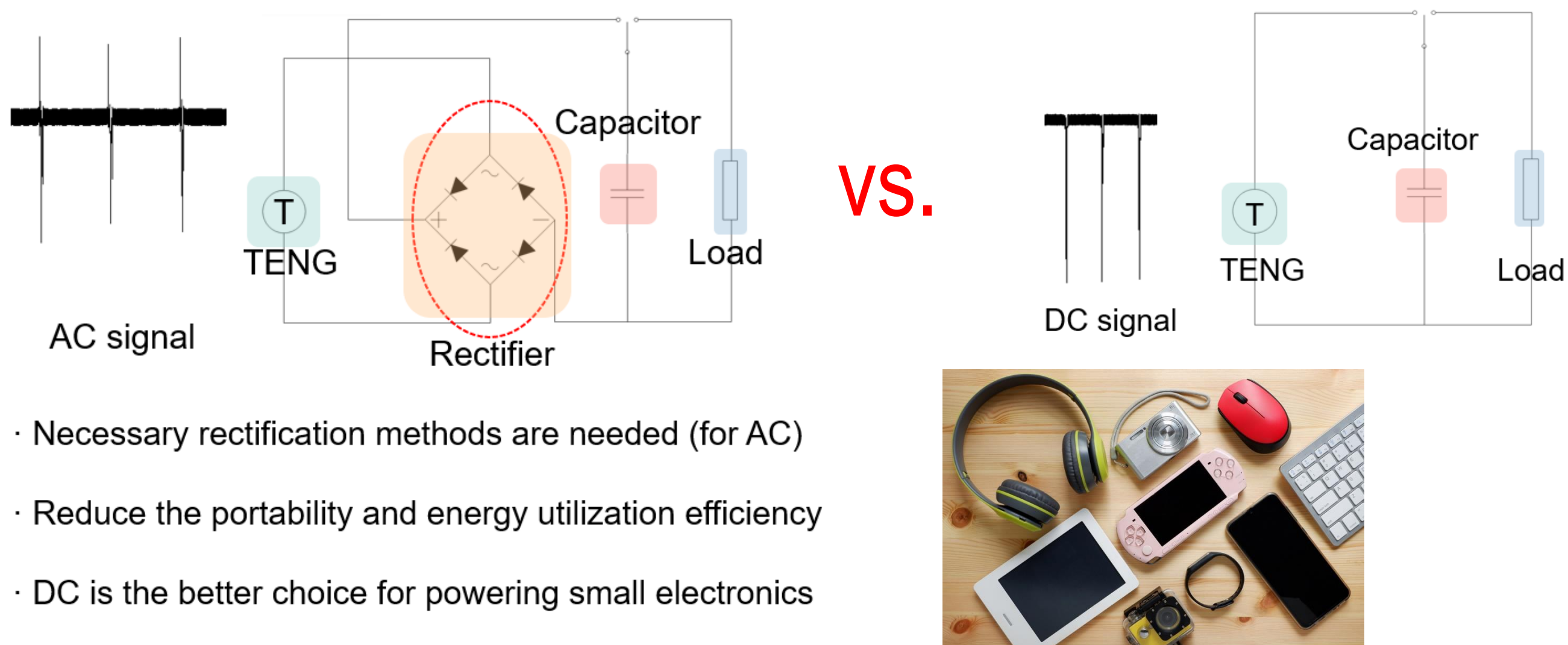
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INTRODUCTION

ADVANTAGE OF DIRECT CURRENT (DC) SIGNAL

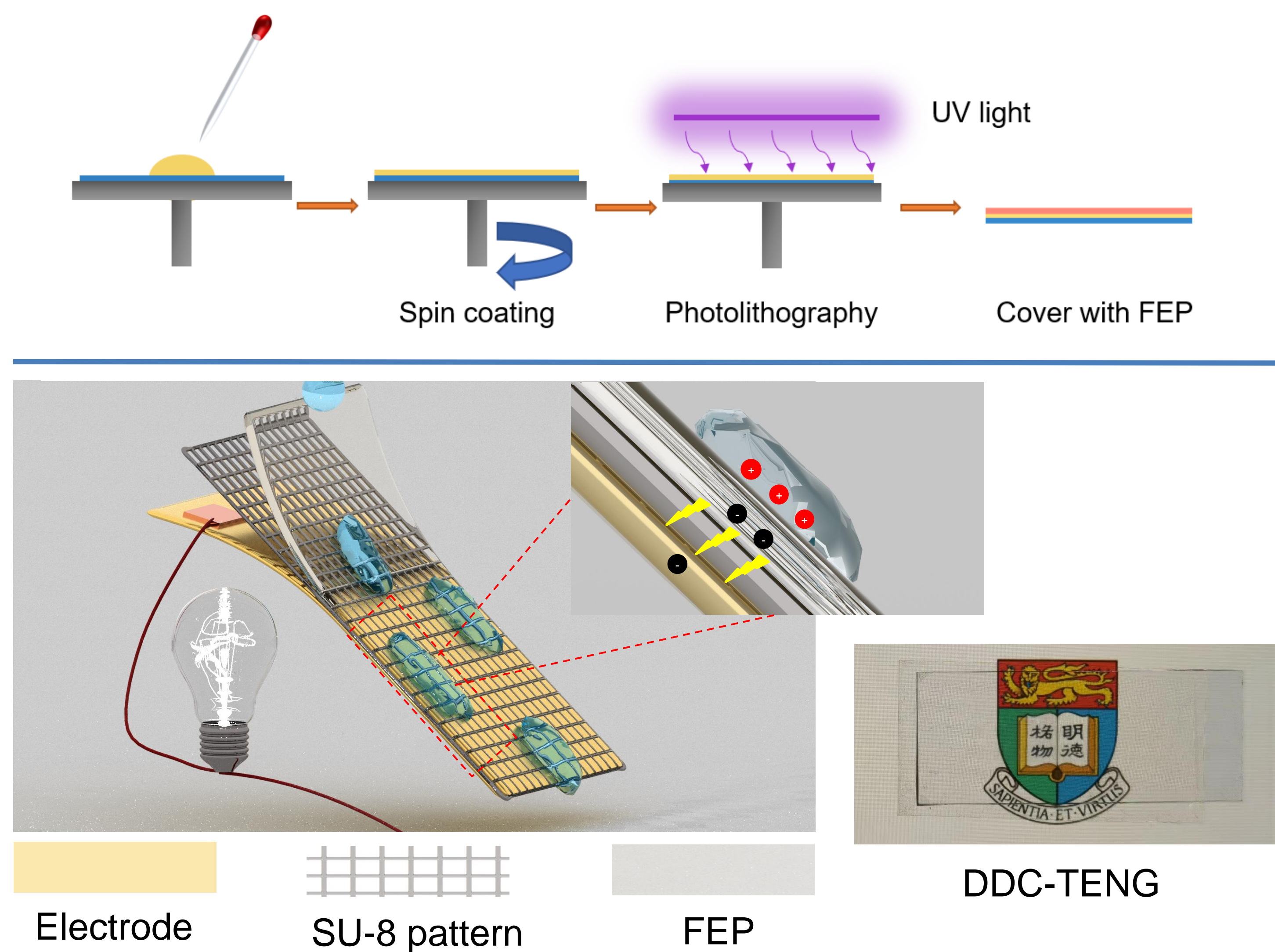


ADVANTAGE OF WATER SOURCE USED IN TENG



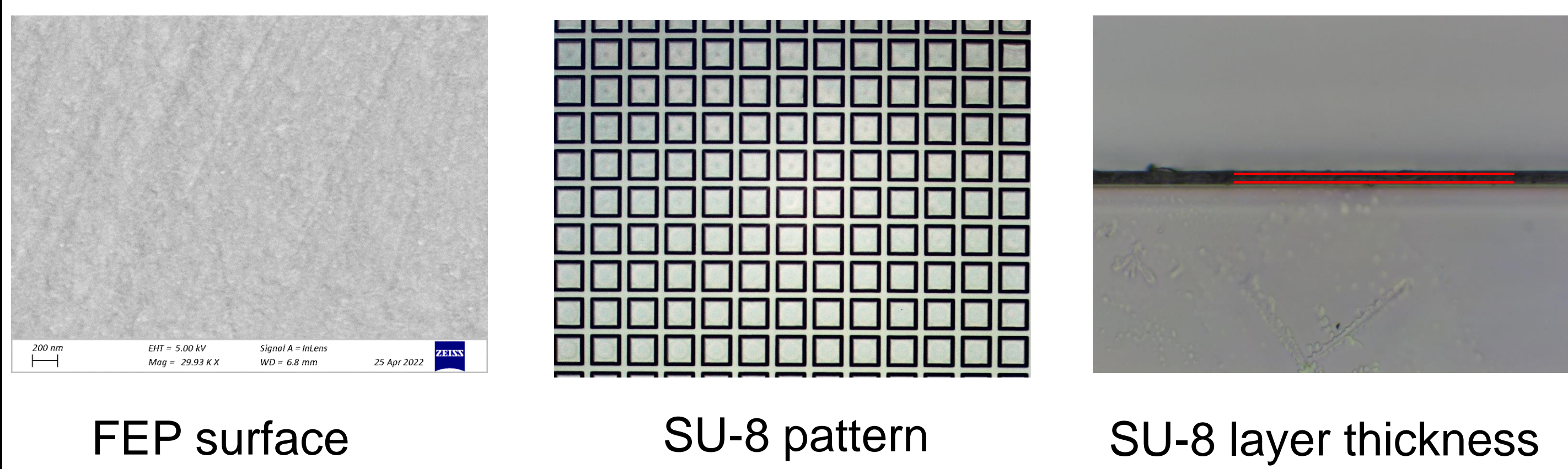
EXPERIMENTAL SECTION

SAMPLE PREPARATION PROCESS

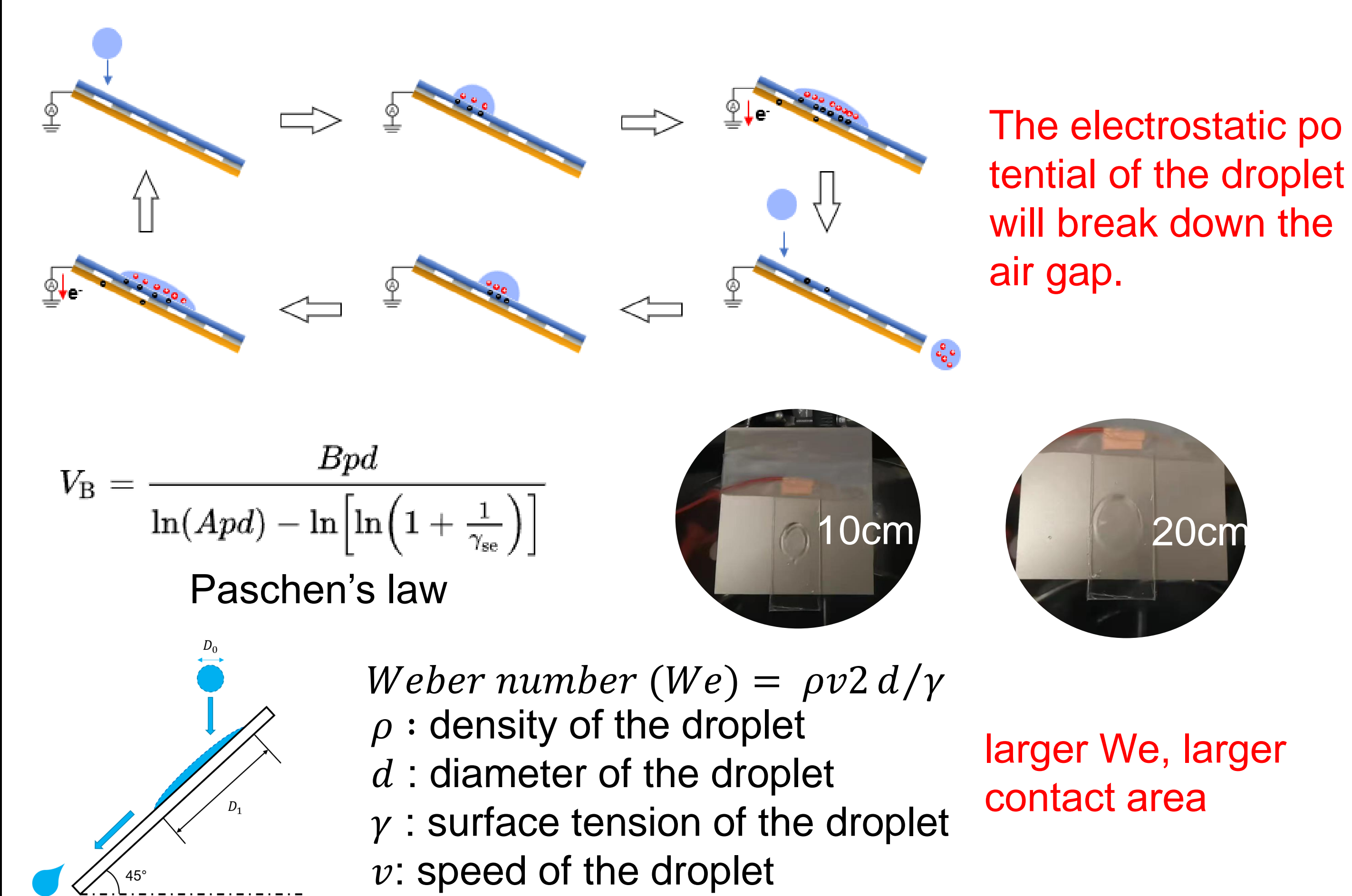


RESULTS & DISCUSSION

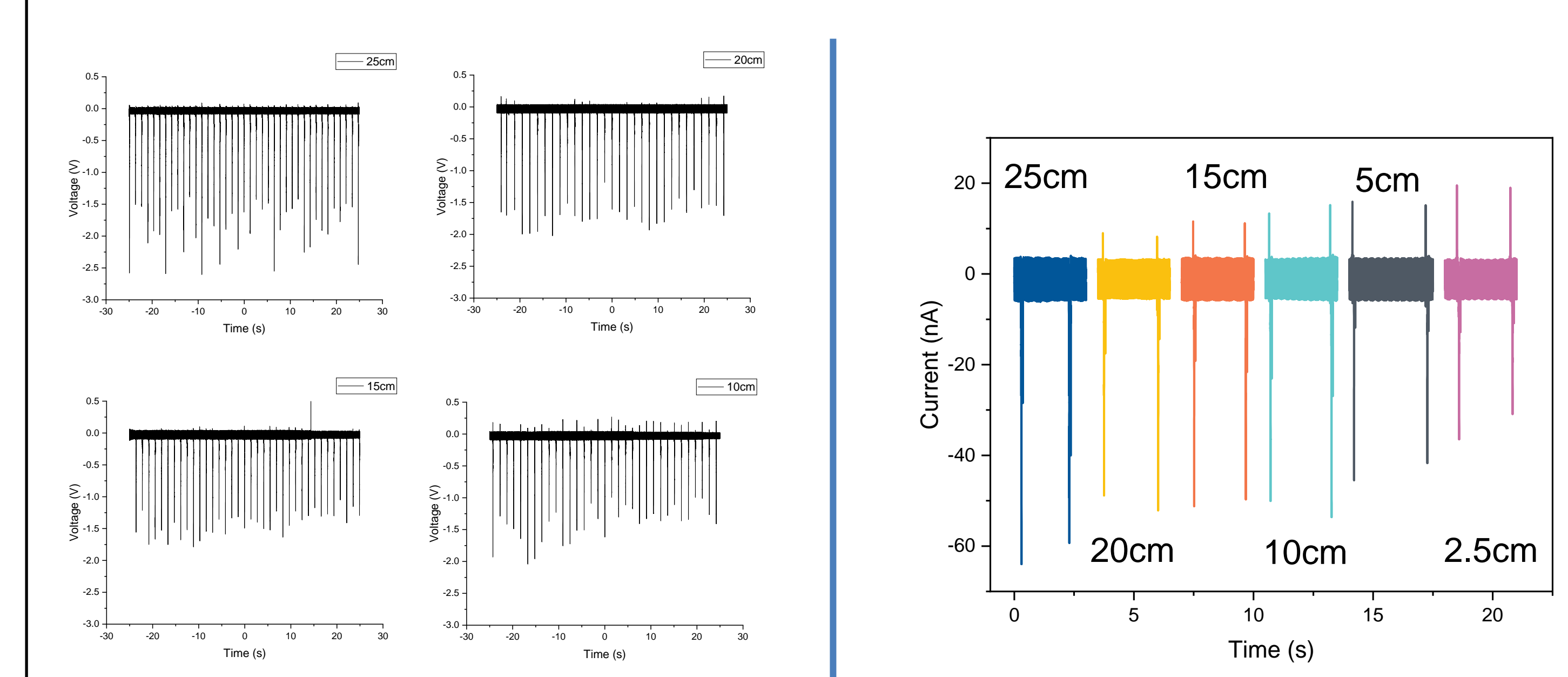
SAMPLE CHARACTERISTICS



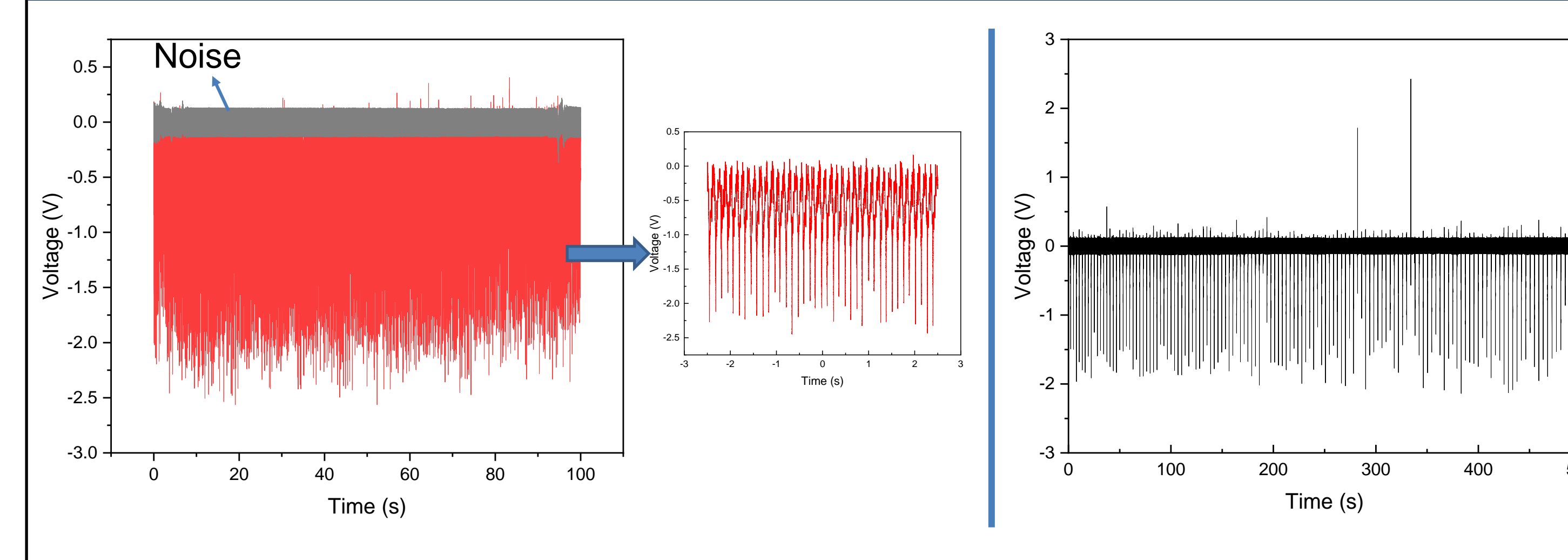
MECHANISM OF THE DDC-TENG



THE OUTPUT PERFORMANCE OF THE DDC-TENG (VOLTAGE & CURRENT)



HIGH FREQUENCY AND LONG-TIME DURATION OF THE DDC-TENG



CONCLUSION

1. A DC triboelectric nanogenerator by inserting a layer of hollow mesh structure between the triboelectric layer and the electrode layer, using a high surface electrostatic potential to break down the air was formed.
2. The size of the diffusion area of the water droplets on the surface is the key to the formation of the DC signal.
3. This single-electrode DDC-TENG provides a way to harvest the energy of water droplets and directly use them in devices, which provides a new idea for wearable flexible electronic devices.

THE OUTPUT PERFORMANCE OF THE DDC-TENG (TRANSFERRED CHARGE)

