NON-THERMAL PLASMA BIO-PRINTER WITH NANO SCALE PRECISION

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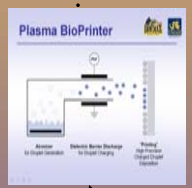

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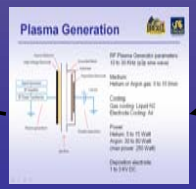

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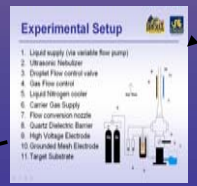

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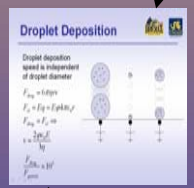

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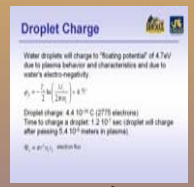

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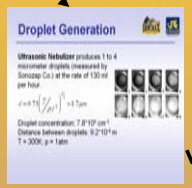

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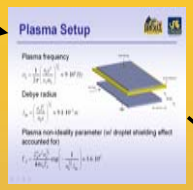

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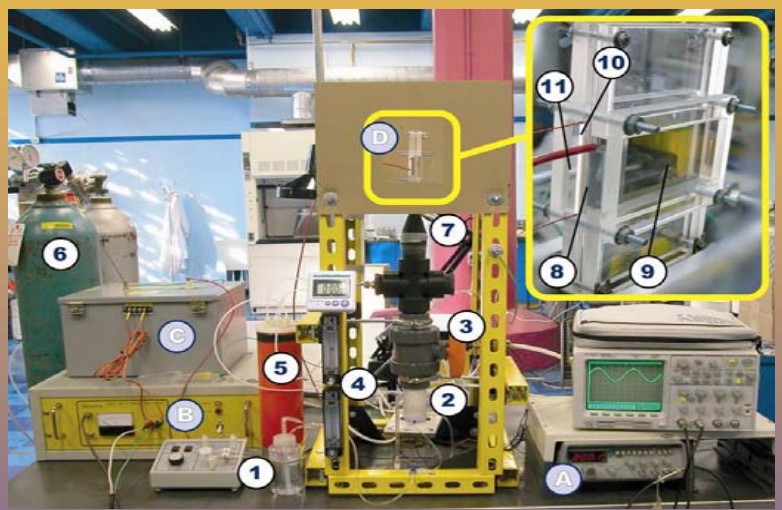
Experimental Setup



Plasma Generation

10KV 20KHz AC is generated by:
A. Signal generator (sine, triangle, square waveform)
B. High frequency current amplifier
C. Power transformer
Voltage is then applied to:
D. Printer head

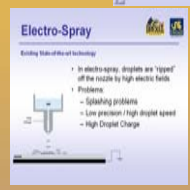
Experimental Setup

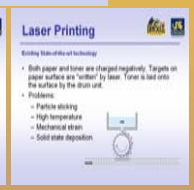
1. Liquid supply (bottle and variable flow pump)
2. Piezoelectric "Ultrasonic Nebulizer"
3. Droplet flow control valve
4. Carrier gas flow control
5. Liquid Nitrogen cooler
6. Carrier gas supply
7. Flow conversion nozzle

Printer Head

8. Quartz dielectric
9. High voltage electrode
10. Grounded mesh electrode
11. Target substrate

History





Applications