

Spacecraft Micro-propulsion

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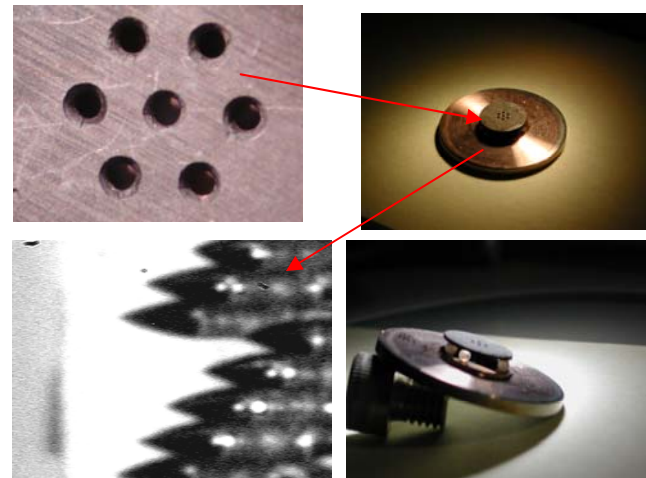
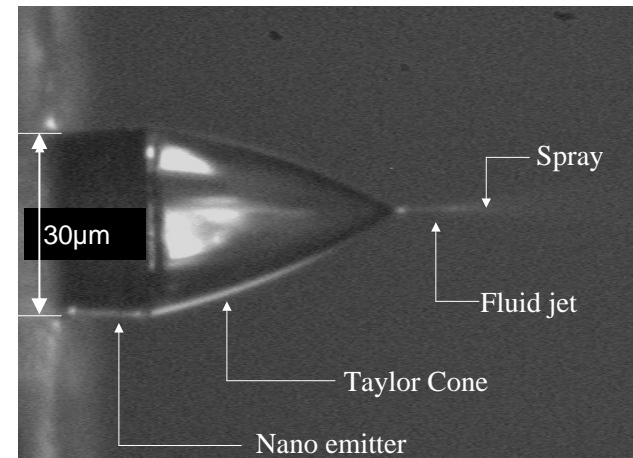
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- New types of space mission have led to new micro-propulsion requirements
- Missions:
 - Formation flying of small satellites
 - Large ‘*Science*’ missions
- Propulsion:
 - Electric propulsion provides most efficient use of propellant and hence better satellite performance
 - Micro fabrication techniques enable an old concept to be competitive



Smart mission used electric propulsion to go to the Moon

- Propulsion concept developed at QMUL is *colloid – electrospray* system
- Unique capability to provide wide range thrust factor: $1 \Rightarrow 10,000$
- Ideal for small satellites as well as large missions
- Concept is ‘safe’ hence ideal for university based activity



- Partnership established between QMUL and Beihang University
- Funding from CNSA ~4million Yuan, to support joint research centre in Beijing
- 1st phase: staff exchange – Prof Tang 1 year at QMUL November 2007; Prof Stark appointed Guest Professor at Beihang August 2007

