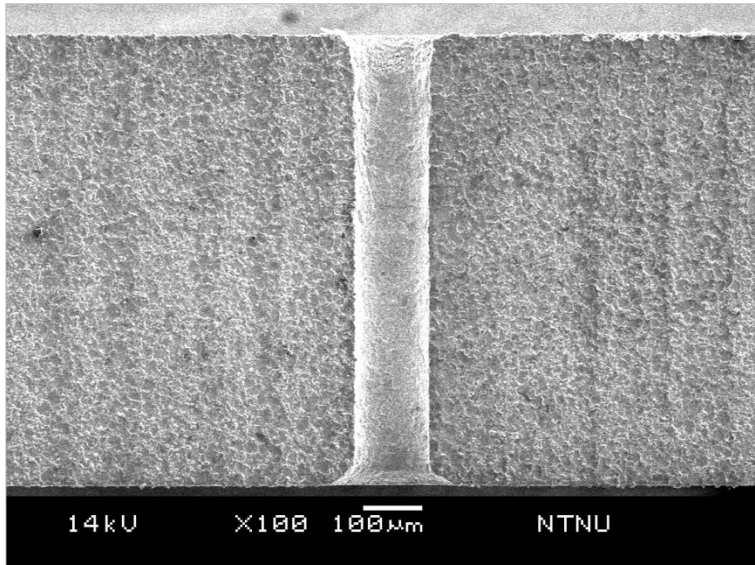


2020 一種線上加速度精密電解法於倒錐微孔噴嘴成形研究

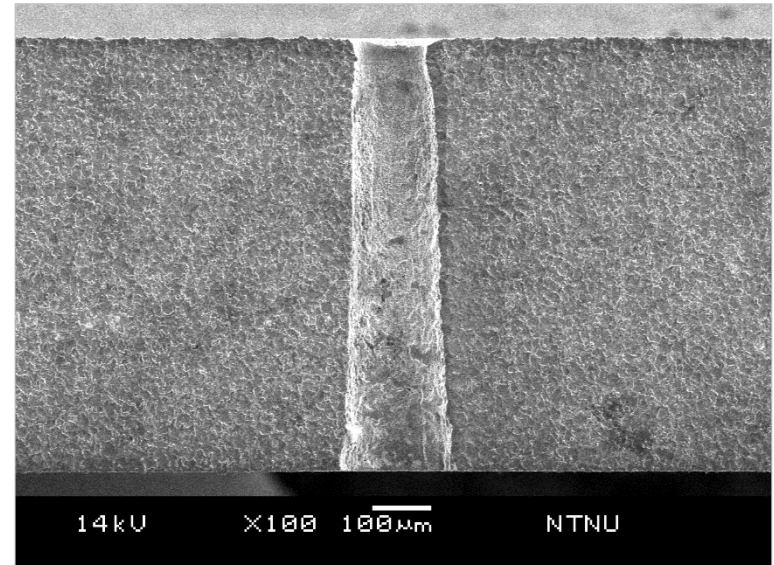
Graduate student : Chiu-Wei Jie



Product	<i>Inverted tapered microhole</i>
Material	<i>SNCM616</i>
Tool	<i>Peripheral insulation tungsten carbide microelectrode</i>
Taper	<i>0.02</i>
Approach	<i>Acceleration Precision Electro-Chemical Machining (A-PECM), In-situ ECM, Epoxy resin isolation</i>
Application	<i>Fuel injector spray in the diesel engine</i>
Technical Description	<i>The microholes with the 0.02 inverted taper rate can be finished when using the acceleration of $2.0 \mu\text{m/s}^2$, respectively. The surface roughness with $Ra < 0.8 \mu\text{m}$ on the hole-wall can be finished which meets the demand for the commercial (diesel engine) nozzle microhole.</i>

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Graduate student : Chiu-Wei Jie



Product	<i>Inverted tapered microhole</i>
Material	<i>SNCM616</i>
Tool	<i>Peripheral insulation tungsten carbide microelectrode</i>
Taper	<i>0.09</i>
Approach	<i>Acceleration Precision Electro-Chemical Machining (A-PECM), In-situ ECM, Epoxy resin isolation</i>
Application	<i>Fuel injector spray in the diesel engine</i>
Technical Description	<i>The microholes with the 0.09 inverted taper rate can be finished when using the acceleration of $1.0 \mu\text{m/s}^2$, respectively. The surface roughness with $Ra < 0.8 \mu\text{m}$ on the hole-wall can be finished which meets the demand for the commercial (diesel engine) nozzle microhole.</i>