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Rapid electropolishing of niobium in non-aqueous solvents

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Niobium EP and BCP progress has the problems of slow polishing rate and high risk of electrolyte. In order to solve this, our team uses a less hazardous and more environmentally-friendly HF-free electrolytes, non-aqueous solvent as electrolyte. High efficiency polishing of niobium can be achieved by applying high pulse voltage. The polishing rate is dozens or even hundreds of times that of traditional electric polishing. The polishing rate is tens or even hundreds of times that of traditional EP. The influence of working parameters on the electropolishing rate and surface effect of niobium is investigated.

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