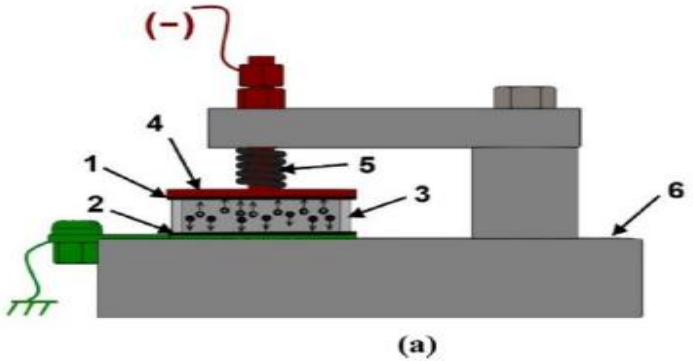
HIGH ENERGY VIBRATIONAL POWDER PLATING (HIVIPP)



(a)

Nuclear Inst. and Methods in Physics Research, A 981 (2020) 164371

CONNOR MOHS
Center for Accelerator Target Science
Physics Division

September 2022

HISTORY

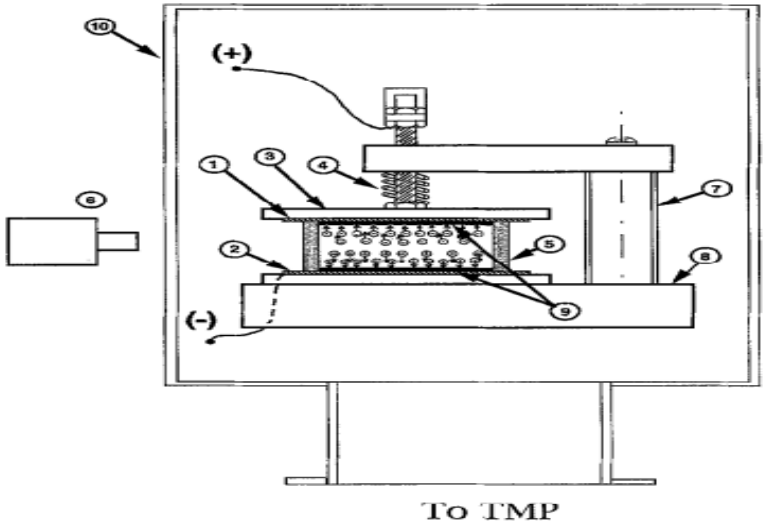


Fig. 1. Schematic drawing of experimental set up; 1: backing foil (upper electrode: anode), 2: backing foil (lower electrode: cathode), 3: press plate, 4: spring for the press plate, 5: glass pipe, 6: He–Ne laser, 7: strut, 8: Teflon holder, 9: deposited layer, 10: glass vacuum chamber.

. Sugai J Nucl. Instr. and Meth. in Phys. Rex A 397 (1997) 81-90

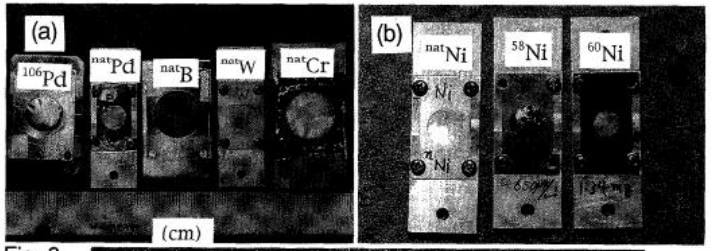
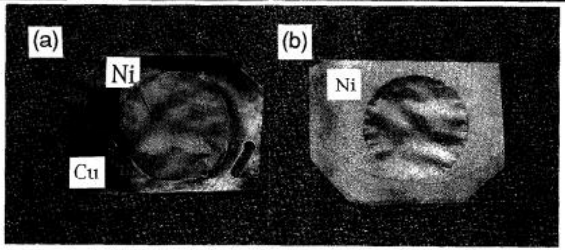


Fig. 8



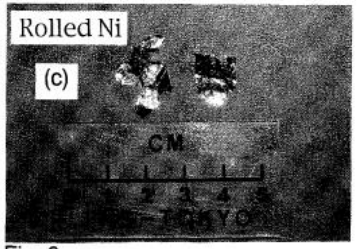


Fig. 9

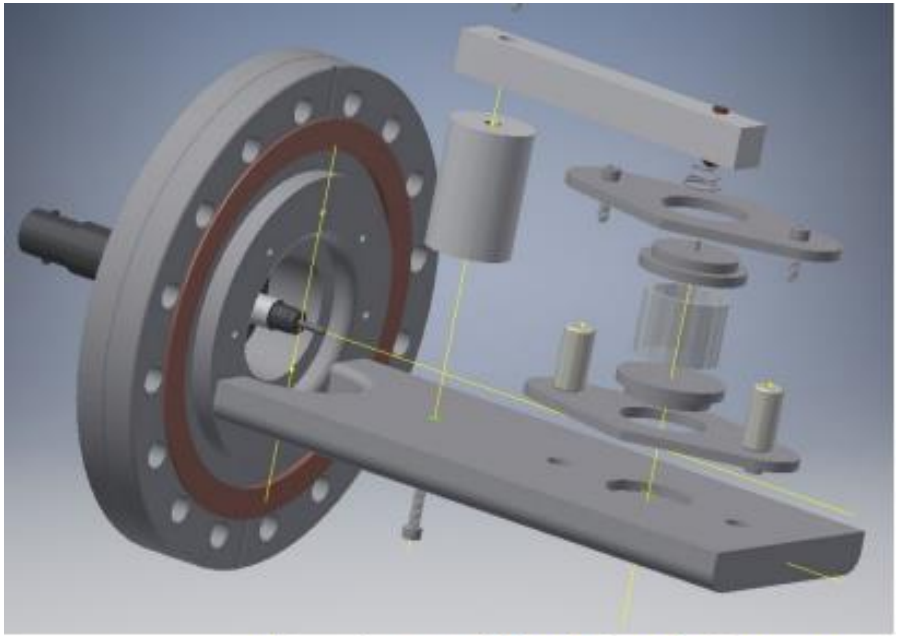
Fig. 8. Pictures of self-supporting targets prepared by the present method; (from left to right) (a) ^{106}Pd(15 mm ∅), ^{nat}Pd (10 mm ∅), ^{nat}B(20 mm ∅), ^{nat}W(10 × 10 mm) and ^{nat}Cr(25 mm ∅). (b) Ni(10 mm ∅), ^{58}Ni(10 mm ∅) and ^{60}Ni(8 mm ∅).

Fig. 9. Photographs of the self-supporting foil of ^{58}Ni. Its thickness is 0.83 mg/cm^2. It was prepared under the conditions of 15 kV, 70 μA for 5 h and from 25 mg starting weight: (a) rear surface after dissolving the Cu backing, (b) front surface, (c) rear surface after rolling.

OBJECTIVES

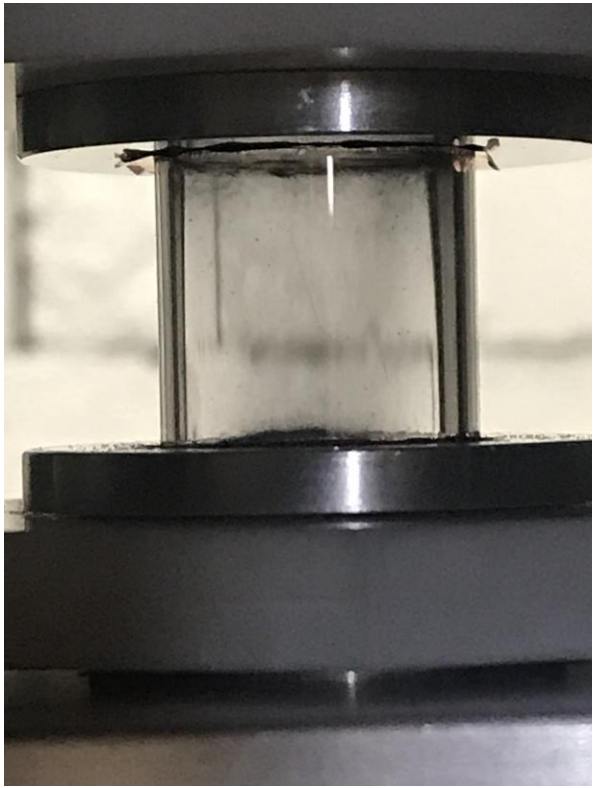
- Efficiency
- Modularity
- Radioactive capability
- Cleanliness

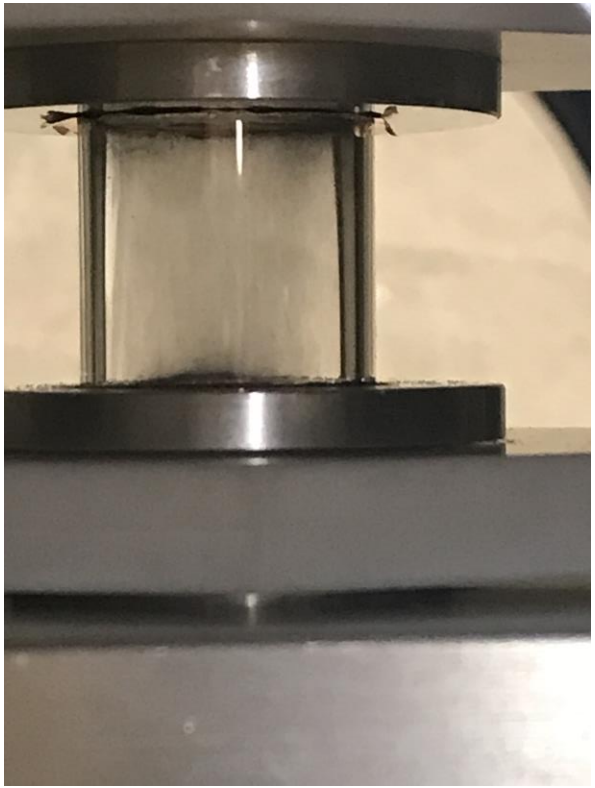
DESIGN



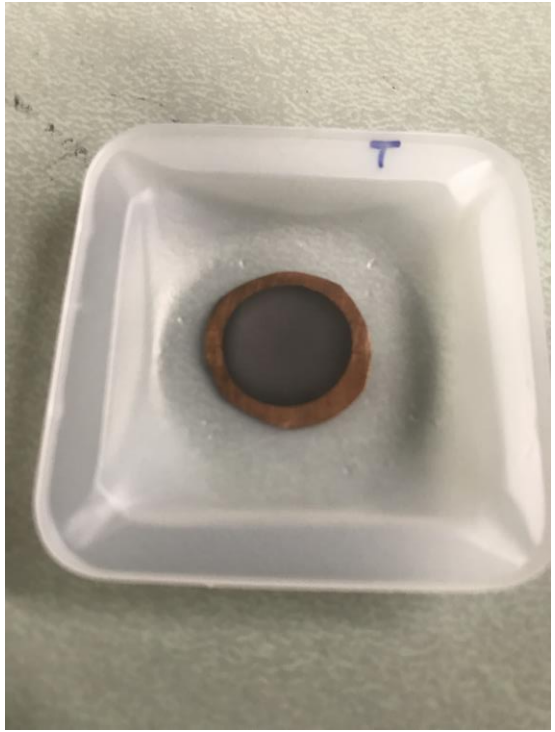
Designed by Ravi Gampa

DEPOSITION



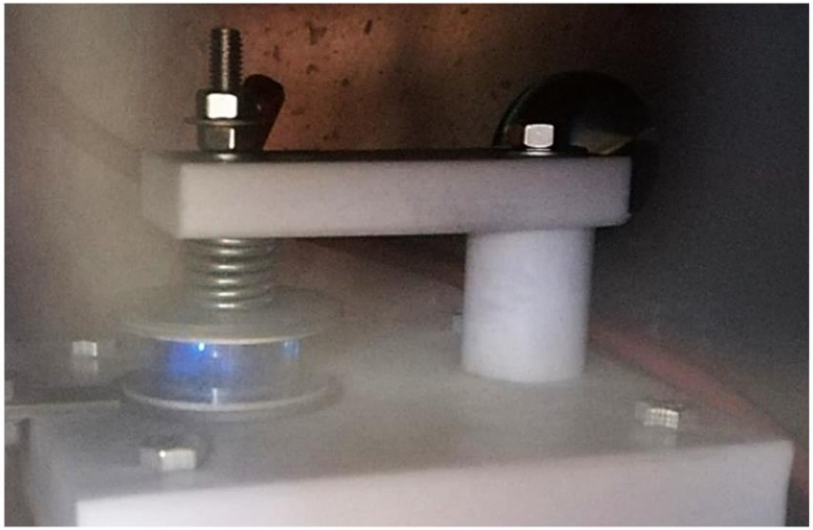


TARGETS



Top Bottom

ARCING



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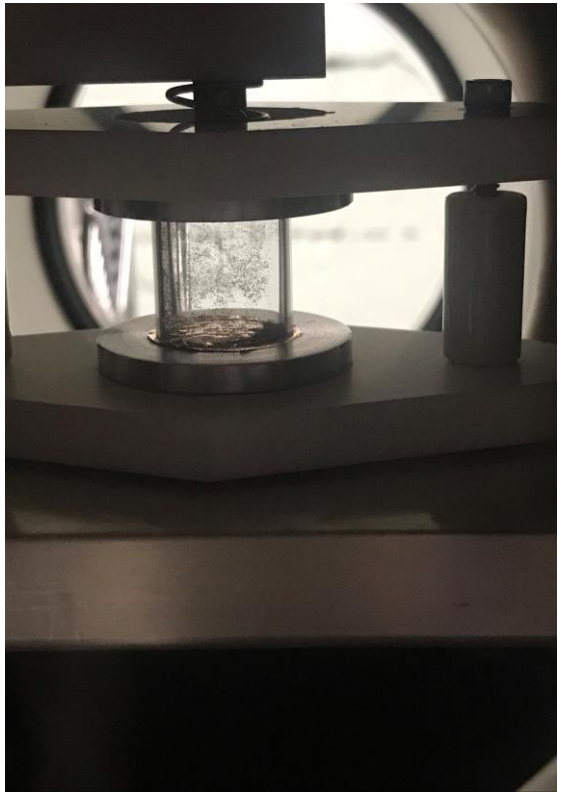
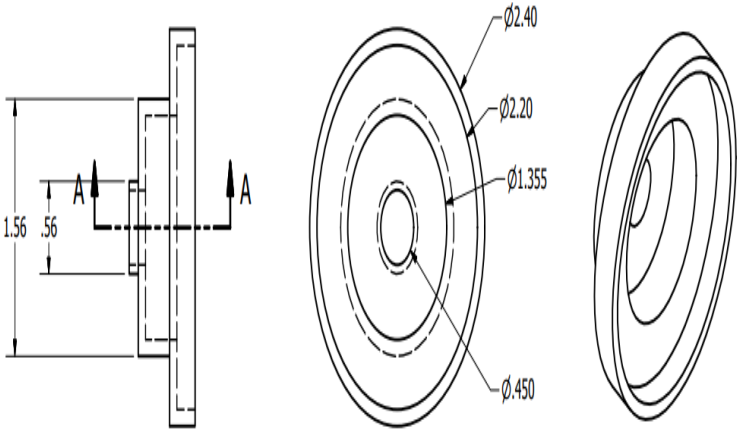
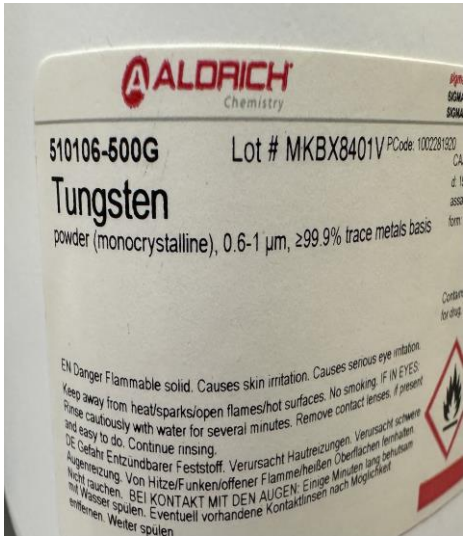


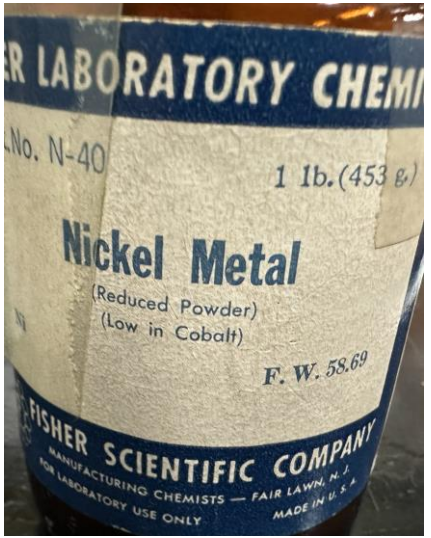
FUTURE

Design Improvements



Testing More Material





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