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APPENDIX 1

Properties of Copper

Density at 20 °C	8.96 g/cc
Melting point	1083.0 ± 0.1 °C
Crystal structure	Face-centered cubic
Recrys. temperature	about 100 - 200 °C

Nuclear properties: Cu^{63} (n, γ) Cu^{64} reaction

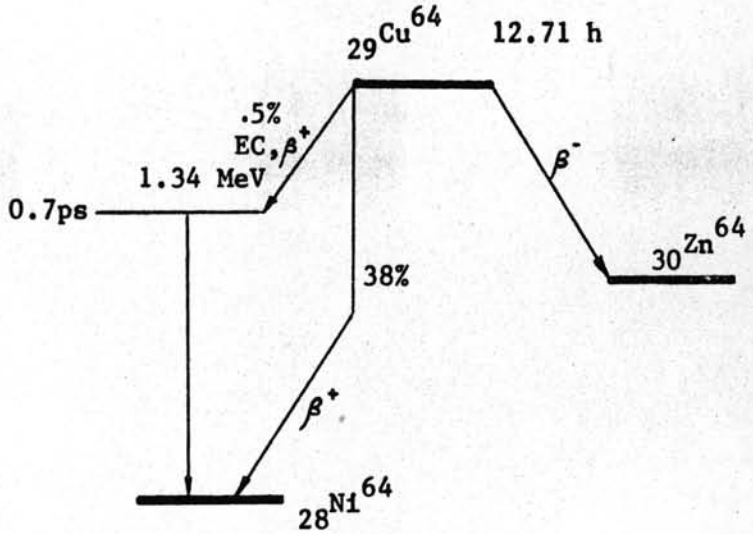
COpper-63	% abundance = 69.1
	σ_c = 4.5 barns
Copper-64	gamma energy : Ni X-rays, 0.511 (38%), and 1.34 (0.5%)

Properties of Tungsten

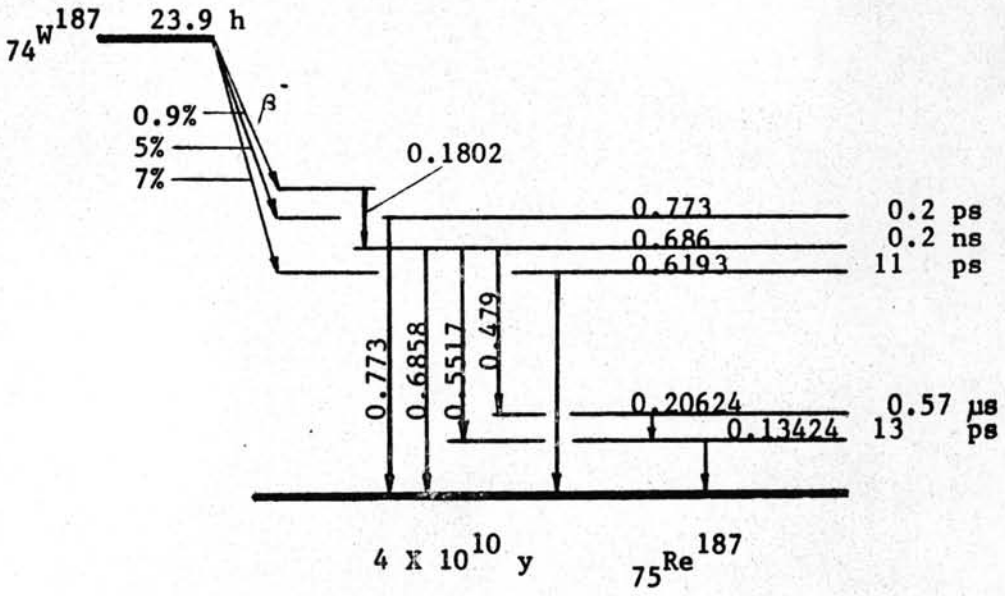
Density at 20 °C	19.3 g/cc
Melting point	3410 °C
Recrys. temperature	1000 to 1200 °C for 1 h , depending on purity and degree of cold work for commercial tungsten, but may range up to more than 2000 °C for alloyed or thoriated tungsten.
Crystal structure	Body-centered cubic

Nuclear properties: W^{186}(n, γ) W^{187} reaction

Tungsten-186	% abundance = 28.4 % , σ_c = 40 barns
Tungsten-187	Gamma energy : Re X-rays 0.072(11%), 0.134(9%), 0.479(23%), 0.552(5%), 0.618(6%), 0.686(27%), 0.773(4%)



Decay scheme of Copper-64



Decay scheme of Tungsten-187

BIOGRAPHY

Mr. Weerachai Banchorndhevakul was born on April 19, 1956 in Bangkok, Thailand. He recieved a Bachelor degree in Metallurgical Engineering from Chulalongkorn University in 1977, and continued his study in the Department of Nuclear Technology, Faculty of Engineering, Chulalongkorn University in the same year.