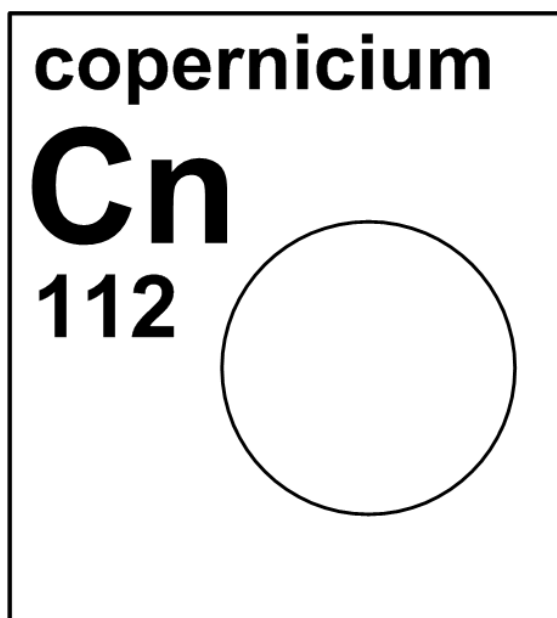


## 4.112 copernicium



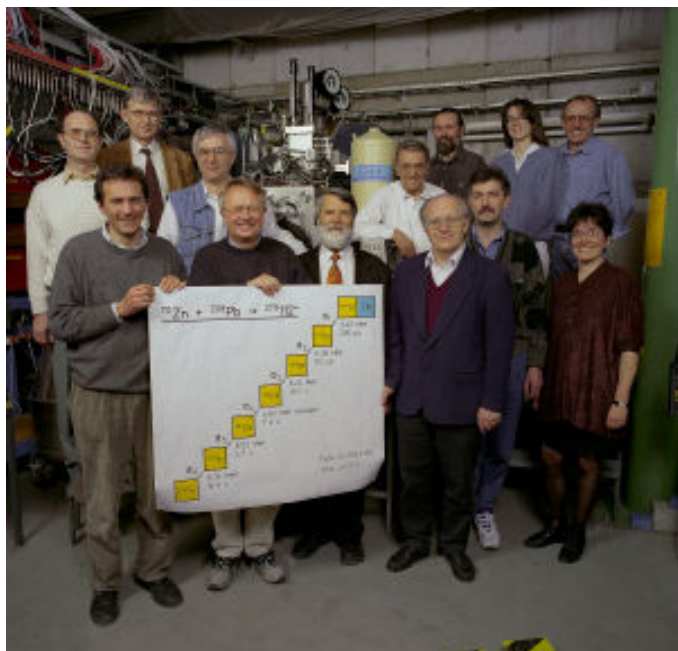
Stable isotope	Relative atomic mass	Mole fraction
(none)		

<sup>277</sup> Cn	<sup>281</sup> Cn	<sup>282</sup> Cn	<sup>283</sup> Cn	<sup>284</sup> Cn	<sup>285</sup> Cn
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Half-life of radioactive isotope

Less than 1 hour 

Copernicium does not occur naturally in the Earth's crust. Copernicium was synthesized by scientists at the GSI Helmholtz Center for Heavy Ion Research in Darmstadt, Germany in 1996 (Figures 4.112.1). Sigurd Hofmann and an international team of scientists used the nuclear reaction  $^{208}\text{Pb} (^{70}\text{Zn}, n) ^{277}\text{Cn}$ . The observed **alpha decays** led to the known nuclide,  $^{269}\text{Sg}$ . The name, copernicium, was given to **element** 112 to honor astronomer Nicholas Copernicus, who is known for his heliocentric theory of how the planets orbit the Sun [660, 661]. Copernicium has no known isotopic applications aside from scientific research.



**Fig. 4.112.1:** The team of international scientists responsible for discovering copernicium.  
(Photo Source: GSI Helmholtzzentrum für Schwerionenforschung GmbH) [660].