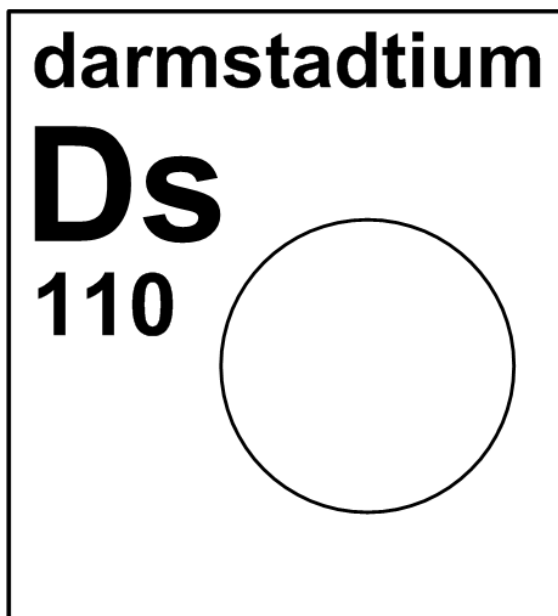


## 4.110 darmstadtium



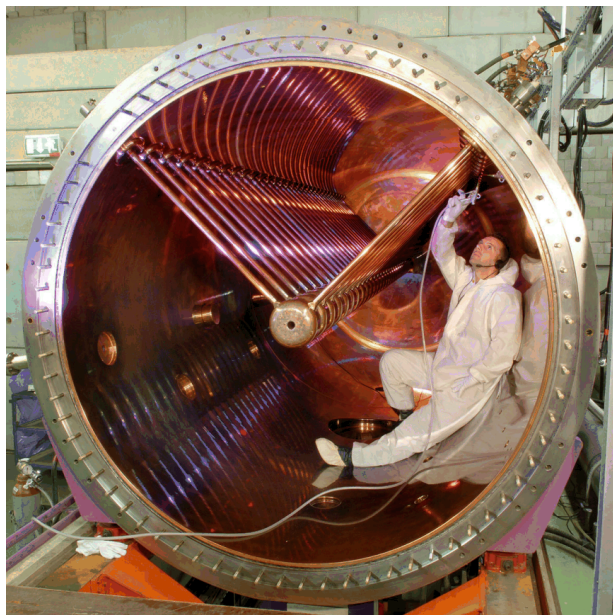
Stable isotope	Relative atomic mass	Mole fraction
(none)		

Half-life of radioactive isotope

Less than 1 hour 

<b>267</b> Ds	<b>269</b> Ds	<b>270</b> Ds	<b>271</b> Ds	<b>273</b> Ds	<b>277</b> Ds	<b>279</b> Ds	<b>280</b> Ds	<b>281</b> Ds	<b>282</b> Ds
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Darmstadtium does not occur naturally in the Earth's crust. Darmstadtium was first synthesized by an international team of scientists from the GSI in Darmstadt, Germany, Joint Institute for Nuclear Research (JINR) in Dubna, Russia, the Comenius University in Bratislava, Slovakia and the University of Jyväskylä, Finland at the GSI Helmholtz Center for Heavy Ion Research in Darmstadt (Figure 4.110.1), Germany in 1994 using the nuclear reaction  $^{208}\text{Pb} (^{62}\text{Ni}, n) ^{269}\text{Ds}$ . The **element** was named darmstadtium after the place where the first synthesis was made [653-656]. Darmstadtium has no known isotopic applications aside from scientific research.



**Fig. 4.110.1:** View inside of the UNILAC (Universal Linear Accelerator) used to create darmstadtium at GSI Helmholtz Centre for Heavy Ion Research in Darmstadt, Germany. (Photo Source: G. Otto, GSI Helmholtzzentrum für Schwerionenforschung GmbH)[651].