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Advances in ²¹¹At production at Texas A&M University

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Alpha emitting radionuclides with medically relevant half-lives are interesting for treatment of tumors and other diseases because they deposit large amounts of energy close to the location of the radioisotope. Researchers at the Cyclotron Institute at Texas A&M University are developing a program to produce ²¹¹At, an alpha emitter with a 7.2 h half-life. The properties of ²¹¹At make it a great candidate for targeted alpha therapy for cancer due to its short half-life and decay mechanism. Astatine-211 has now been produced multiple times and novel chemistry has been developed for the separation of the At from the Bi target. Innovations to improve the safety and reliability of this process have been enacted.

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