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Superheavy Nuclei to Hypernuclei: A Tribute to Walter Greiner

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In nuclear physics, superheavy and hypernuclei are two of the most important fields of research. The prediction of islands of superheavy elements ($Z = 114$, $N = 184$, 196 and $Z = 164$, $N = 318$) in late sixties by the Frankfurt school played a key role in extending the periodic table of elements up to atomic number 118. Similarly, the demonstration that nuclear matter can be compressed 510 times of its original volume by nuclear shock waves, produced during heavy ion collision, led to the production of single- and double-lambda hypernuclei, as well as anti-matter nuclei. Recent observation of antihypertriton—comprising an antiproton, an antineutron, and an antilambda hyperon, by the STAR collaboration has now made it possible to envision a 3-dimensional nuclear chart of hypernuclei. My own interest in superheavy and hypernuclei was shaped from my first meeting with Walter Greiner at the International Conference on Atomic and Nuclear clusters held at Santorini, Greece in 1993. I will present a brief summary of these exciting developments, including some of our own work. Professor Greiner's vision, enthusiasm, and encouragement touched many lives and I was one of those privileged ones.

Topic:

Memorial session for W. Greiner

Summary

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