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Double-degenerate Bose-Fermi mixture of strontium
FLORIAN SCHRECK, IQOQI, OEAW

We report on the attainment of a double-degenerate Bose-Fermi mixture of strontium. A sample of fermionic $^{87}$Sr atoms is spin-polarized and sympathetically cooled by interisotope collisions with the bosonic isotope $^{84}$Sr. A degeneracy with $T/T_F = 0.30(5)$ is reached for a $^{87}$Sr Fermi sea of $2 \times 10^4$ atoms together with an almost pure $^{84}$Sr BEC of $10^5$ atoms. The rich electronic structure and the large nuclear spin of $^{87}$Sr make it a promising candidate for quantum simulation of SU($N$) magnetism and quantum information processing.