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Maciej Borodzik* (mcboro@mimuw.edu.pl), Banacha 2, 02-097 Warsaw, Poland. *Algebraic unknotting and 4-manifolds.*

We prove that if the algebraic unknotting number of K is n , then the zero-surgery on the knot is the boundary of a topological 4-dimensional manifold with specific homological properties and $b_2 = n$. We sketch also prove of the converse result, giving the full interpretation of the algebraic unknotting number in the language of 4-dimensional topology. This is joint work with. S. Friedl. (Received August 28, 2012)