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Torsion in link concordance and Hirzebruch-type invariants from iterated p -covers

We obtain invariants of topological homology cobordism of 3-manifolds and link concordance from iterated p -covers. Our invariants have values in certain L -groups and can detect torsion which is invisible via signature invariants. We also show that the invariants can extract information from arbitrarily higher terms of the derived series of the fundamental group. Applications include the first proof of the conjecture that the Bing double of the figure eight knot is not slice.