

フィジカ・シー：超伝導とその応用，2005年から2010年の最多引用回数論文賞  
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## 改良パルス着磁による高温超伝導バルクへの 5 テスラを超える高い捕捉磁場

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### Higher trapped field over 5 T on HTSC bulk by modified pulse field magnetizing

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超伝導の専門紙 Physica C において，2005年から2010年の最多引用回数となった論文として受賞。冷凍機で冷却した高温超伝導バルク体に，改良したパルス着磁法によって5 テスラを超える磁場捕捉に成功したもの。

The trapped field 5.20 T has been realized on the Gd-Ba-Cu-O bulk superconductor by the modified multi-pulse technique combined with a stepwise cooling (MMPSC), which surpassed the previous highest record of 4.47 T. At the first stage, a small amount

of the magnetic field 1 T was trapped at the bulk center with a concave field distribution at a high starting temperature 45 K by the low pulse field application of 4.5 T. Following the first stage, the higher field of 6.7 T was applied at a lower temperature 30 K at the second stage. The concave trapped field profile over the bulk at the first stage and the optimization of the higher applied pulse field at the second stage are key points to enhance the trapped magnetic field above 5 T.

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