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## Investigation of properties of CuZr alloy for vacuum chamber structural materials

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CuZr alloy is considered for the structural material of the vacuum chamber of the Hefei Advanced Light Facility (HALF) storage ring. We tested the outgassing rate of CuZr material. The outgassing rate of CuZr alloy can reach  $4.93 \times 10^{-11}$  Pa·L/s·cm<sup>2</sup> after baking at 180°C for 48h, which is more than one order of magnitude lower than that of SS. These results indicate that CuZr alloy is easier to degas by baking at lower temperatures and is a material with very low outgassing rates. At the same time, it is a highly competitive structural material for future accelerator vacuum chamber based on its good electrical conductivity, high strength and hardness.

### Footnotes

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### Region represented

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