

## **Transformation of the DC and AC Magnetic Field with Novel Application of the YBCO HTS ring**

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**Abstract**—With the new arrangement to be presented we can transfer the magnetic energy of DC or AC magnetic fields inductively between two independent iron cores from one closed iron core to the other one. Thus, DC magnetic field can be transformed in a controlled way. This method can result in novel applications in the field of transferring both the energy of DC magnetic field and AC electrical energy. The paper presents preliminary results of experiments with showing leading idea. The successful results of experiment open new advanced application of superconducting regardless type of superconductors.

**Index Terms**—Superconducting devices, transformer

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