

Ink for the production of superconducting flexible tapes

CSIC, through the Institute of Materials Science of Barcelona ICMAB have developed a new YBCO precursor solution suitable for TLAG-CSD growth of superconducting films.

Industrial partners are being sought to collaborate through a patent license agreement.

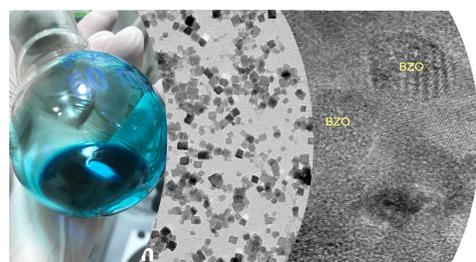
An offer for Patent Licensing

Stable fluorine-free superconducting solutions

The introduction of High Temperature Superconductors (HTS) in flexible tapes, specifically Coated Conductors (CCs) allowed their industrial implementation.

Our researchers developed a new technique to produce CCs, the Transient Liquid Assisted Growth-Chemical Solution Deposition (TLAG-CSD). This technique is 100 fold faster than currently used techniques. A key point of the technique is the production of the solution ink that will create the superconducting layer in the CCS.

We present a novel class of environmentally friendly solutions and colloidal solutions with higher stability. The use of these solutions increases the structural homogeneity of the superconducting film and their performance.



Multifunctional colloidal ink and microstructure analysis of the nanoparticles included

Main innovations and advantages

- New inks are used in the TLAG-CSD technique for fast flexible superconducting tapes production.
- Fluorine-free inks, meeting the requirements of green chemistry
- Enhanced structural homogeneity and performance of the superconducting layer

Patent Status

Patent application filed and suitable of international extension

For more information, please contact:

Alfonso del Rey

Deputy Vice-Presidency for
Knowledge Transfer

Spanish National Research Council
(CSIC)

Tel.: +34 935801853

E-mail: adelrey@icmab.es

comercializacion@csic.es