

Writing Excellent Abstracts and Titles

**A hands-on workshop for improving
article discovery and readership**

**Hosted by the Editors of the ACerS Journals
and the Young Professionals Network**

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Why?

Writing well is the first step of being cited

- **Decision to read based on title/abstract**
 - Informative
 - Interesting, including importance
 - Concise, well-written
- **Discovery – people finding your article**
 - 54% of articles found through search engines
 - Follow the rules to get indexed properly!

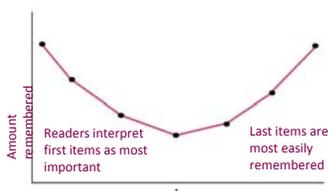


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Writing for Readers

Two principles for key messages

- **Clear, concise messages**
 - What you did and found
 - Why it was important
- **Well organized**
 - Something important & new at beginning
 - Middle: background
 - Something else new & important at end



Writing for Readers

Example (layout)

The most important findings (and why it's new/significant)

We demonstrate that microwave-assisted dissolution produces stable, anhydrous organometallic superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ (YBCO) precursor. This method is significantly faster than conventional oil bath heating and yields higher purity solutions.

Enough background to explain the article

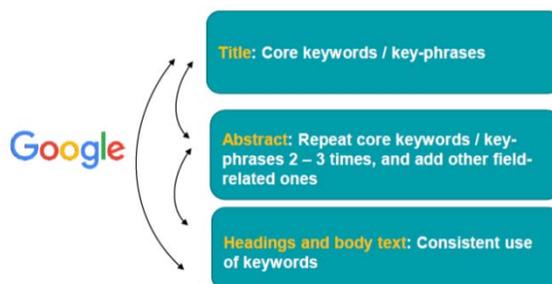
Solutions were prepared using microwave-assisted heating to dissolve commercial YBCO powder. Trifluoroacetic anhydride (TFAA)/acetone was the solvent for TFA-based precursor. A mixture of TFAA and propionic acid in acetone was used for low fluorine precursor. Using our precursors and optimized film processing we obtained YBCO thin films with critical current densities higher than values reported in the literature.

The benefit (why it's important)

Thus microwave-assisted preparation of YBCO precursor shows promise for lowering the costs for large-scale production of superconductor coatings by chemical solution deposition (CSD) while simultaneously improving the electrical properties of the coatings.

Indexing and Discovery

Proper keyword usage is, well, key



Writing to be Discovered

Example (keywords)

Keyword list

microwave-assisted

YBCO

precursor

superconductor

Note: 10K-100K searches per month on Google for "superconductor"

We demonstrate that **microwave-assisted** dissolution produces stable, anhydrous organometallic **superconductor** $\text{YBa}_2\text{Cu}_3\text{O}_{7.5}$ (**YBCO**) **precursor**. This method is significantly faster than conventional oil bath heating and yields higher purity solutions.

Solutions were prepared using **microwave-assisted** heating to dissolve commercial **YBCO** powder. Trifluoroacetic anhydride (TFAA)/acetone was the solvent for TFA-based **precursor**. A mixture of TFAA and propionic acid in acetone was used for low fluorine **precursor**. Using our **precursors** and optimized film processing we obtained **YBCO** thin films with critical current densities higher than values reported in the literature.

Thus **microwave-assisted** preparation of **YBCO precursor** shows promise for lowering the costs for large-scale production of **superconductor** coatings by chemical solution deposition (CSD) while simultaneously improving the electrical properties of the coatings.

Titles

Balanced, Interesting, Keyword driven

Examples

- "Vibrational spectroscopy of silicate glasses" **Solid (though not exciting)**
- "Some measurements on silicate glasses" **Too vague**
- "High temperature AC electrical conductivity measurements of alkaline earth vanadate glasses doped with zinc and copper bromide and chloride" **Too specific**

Real Titles (from IJAGS)

- " 'Nanostructures and 'Nanonothingness' in Unique Glass Microspheres"
- "An Assessment of Bulk Metallic Glasses for Microelectromechanical System Devices"



Workshop Instructions

1. Get into groups of 2-5 people
2. Decide on the general topic you'd like to explore
 - Synthesis/property measurement
 - Bioceramics
 - Electroceramics/energy
3. Send someone to pick up enough packets for your group
 - Note: titles/abstracts are from articles published in ACT
4. Review example of well-written abstract (first abstract in packet)
5. Choose one of the remaining items for group to review
6. Analyze and, as a group, suggest improvements
 - If time permits, revise abstract and/or title – conclusions provided for assistance
7. Write suggestions (or revision) on large paper; paper-clip copy of original title/abstract to sheet
 - If time permits, do the same with a second article; could be your own
8. Stick paper to wall so rest of workshop can review your suggestions/revisions