



U.S. DEPARTMENT OF
ENERGY

Office of
Science

Grant Writing - Tips

BES ECN - 2022 Early Career Grant Writing Webinar

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April 12, 2022

Outline

- **My Background**
- **Grant Writing: Tips # 1 to 5 !**



My Background

- **Ph.D.** (2005), from McMaster Univ. [*condensed-matter physics/solid state chem.; correlated oxides*]
- **Postdoc** (2007), at Ames Laboratory [*magnetic materials; intermetallics*]
- **Wigner Fellow** (2007-2009), at Oak Ridge National Laboratory (ORNL)
- Department of Energy (DOE)'s **Early Career Awardee** (2010-2015) [*high- T_c Fe-based superconductors*]
- **Senior researcher**, lead of a multi-PI research team (2015-2020) on a Basic Energy Sciences (BES) project, at ORNL. [*Study of chemical, electronic, and spin competitions in low-dimensional magnets, unconventional superconductors, and quantum spin liquids.*]
- Part-time **detail to BES** (~2018-2020), while at ORNL
- **Program manager at BES** (August 2020 - on):
 - ❑ Co-manager of ***Physical Behavior of Materials*** program
 - ❑ Acting program manager for operations of ***Nanoscale Science Research Centers***

Tip 1: Find your Research Alignment with a Funding Agency

Mission: To ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions

*SC is the Federal Government's largest single funder of **materials** and **chemical sciences**.*

Mission: To **understand, predict, and ultimately control matter & energy** at the electronic, atomic, and molecular levels

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Tip 2: Learn the Latest Scientific Findings

- ✓ Find the state-of-the art/field through **review documents** and peer-reviewed **publications** (e.g., databases such as Web of Science)
- ✓ Use **other resources**, for example, take note of BES-sponsored **workshop reports** that address the current status, and recommend priority research directions/opportunities (PRDs/PROs)



<https://science.osti.gov/bes/Community-Resources/Reports>

Tip 3: Find Funding Opportunity Announcements (FOAs)

Follow each FOA's details and guidelines:

- ✓ Note if there are any specific Science Focus Areas
- ✓ Pay attention to the Closing Date, and if a pre-application is required
- ✓ Check eligibility conditions
- ✓ Propose your project's budget according to the award size
- ✓ Give sufficient science scope, based on feasibility and years of funding
- ✓ Have proof-of-concept, and propose forward-looking innovative research

Tip 4: Plan to Review Well!

- **Find your niche**, in a crowded research field!
- **Proposal space is valuable** – offer a short background on why your proposed research is important technologically, and longer background on the science you are proposing. Most important: mainly write on the actual research being proposed!
- ***Reusing a proposal already submitted to another agency?*** Remember to indicate this in the application – and pay attention to revising the proposal as to not include sections only relevant to the other agency.
- Put forth a **structured, organized, and formatted proposal** – do not “burry” important details, but make sure they are clearly shown and easily found.
- **Avoid typos!** Use **updated references!**

Tip 5: Consider the Potential Review Criteria

Some review criteria may be the following:

- ❖ Responsiveness to the objectives and requirements of the FOA
- ❖ Science and technical merit
- ❖ Appropriateness of the proposed research approaches
- ❖ Likelihood of scientific success/impact



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