

Opportunity Title: Stored energy detection in complex environments

Opportunity Reference Code: IC-17-30

Organization Office of the Director of National Intelligence (ODNI)

Reference Code IC-17-30

How to Apply **Create and release your Profile on Zintellect** – Postdoctoral applicants must create an account and complete a profile in the on-line application system. **Please note: your resume/CV may not exceed 2 pages.**

Complete your application – Enter the rest of the information required for the IC Postdoc Program Research Opportunity. The application itself contains detailed instructions for each one of these components: availability, citizenship, transcripts, dissertation abstract, publication and presentation plan, and information about your Research Advisor co-applicant.

Application Deadline 3/31/2017 11:59:00 PM Eastern Time Zone

Description **Unclassified Research Topic Description, including Problem Statement:**

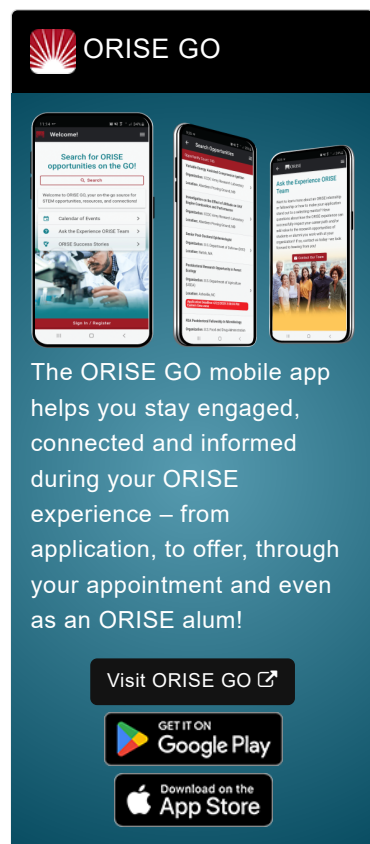
Historically, efforts to screen for energetic materials have concentrated on detecting specific materials. However, the ability to assess the total stored chemical energy within a parcel or bag would enable qualitative assessments to be made on the probability of items of interest being contained. For example, a large number of batteries, or a battery and an energetic material.

A technique that could assess the total stored energy, regardless of whether that be in a battery or in energetic materials, would be a valuable tool for security screening applications.

Unclassified Example Approaches:

Example approaches are hard to describe as this is an opportunity to be truly innovative. It is anticipated that an examination of the properties of material bonds or quantum physical properties of materials may have some success in this area.

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Doctoral Degree.
 - **Discipline(s):**
 - **Business** ([11](#))
 - **Chemistry and Materials Sciences** ([12](#))
 - **Communications and Graphics Design** ([6](#))
 - **Computer, Information, and Data Sciences** ([16](#))
 - **Earth and Geosciences** ([21](#))
 - **Engineering** ([27](#))
 - **Environmental and Marine Sciences** ([14](#))
 - **Life Health and Medical Sciences** ([45](#))
 - **Mathematics and Statistics** ([10](#))
 - **Other Non-Science & Engineering** ([13](#))
 - **Physics** ([16](#))
 - **Science & Engineering-related** ([1](#))



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- **Social and Behavioral Sciences** ([28](#) )