

Special Notice 13-SN-0022
Special Program Announcement for 2013 Office of Naval Research
Research Opportunity:
Multi-Tasking Catalysis

I. INTRODUCTION

This announcement describes a research thrust, entitled “Select Topics in Materials Research” to be launched initially under the current, FY 13 Long Range BAA, ONRBAA13-001, entitled, “Long Range Broad Agency Announcement for Navy and Marine Corps Science and Technology” which can be found at <http://www.onr.navy.mil/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx>. White papers will be received under the current FY13 Long Range BAA, ONRBAA13-001; however, full proposals will be received under the upcoming FY14 Long Range BAA, ONRBAA14-001 - which is expected to be released in September 2013 - since the requested submission date for full proposals will be after the expiration of the current, FY 13 Long Range BAA, ONRBAA13-001. The requirements for proposal submission, evaluation, and award of any resulting contracts and grants will ultimately be subject to the terms described in the upcoming, FY14 Long Range BAA, ONRBAA14-001. Potential Offerors may review the current FY13 Long Range BAA, ONRBAA13-001, to get a general understanding of what the proposal requirements may be in the upcoming FY14 Long Range BAA, ONRBAA14-001.

The research opportunity described in this announcement currently falls under the following sections of FY13 Long Range BAA, ONR BAA13-001:

Multi-Tasking Catalysis:

Section I, entitled “General Information”, sub-section 6, entitled “Research Opportunity Description”, the “Sea Warfare and Weapons Department (Code 33)” item, paragraph 2), subparagraph b, entitled “Structural Materials”.

The purpose of this announcement is to focus attention of the scientific community (1) on the areas to be studied, (2) to initiate dialogue amongst those interested in these areas, and (3) on the planned timetable for the submission of white papers and proposals.

II. TOPIC DESCRIPTION

The selected topic in this special notice is designed to address research and technology gaps in the area of materials research technology in ONR’s current program portfolio. The program will pursue basic or early applied research that complement and enhance existing ONR/DoD programs.

Objective:

The Office of Naval Research (ONR) is interested in receiving proposals on the following research topic:

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“Multi-Tasking Catalysis”

The *objective* of this program is to encourage research and innovation in this topic area with the understanding that the research to be done will provide a foundational knowledge such that technology transitions can eventually be made for a variety of Navy needs.

The program will address scientific and technical challenges in the area of multi-tasking catalysis:

In spite of their utility and well-established efficacy, both biological catalysts that have evolved over millennia, as well as man-made catalysts generally do one task at a time. ONR envisages multitasking catalysts that, on-the-fly, can be changed *in situ* so that multiple steps in a synthetic sequence can be affected, one after the other, in high yields and with high stereoselectivities. External stimuli for affecting this could include pressure/volume/temperature control; use of small molecules, salts, solvent properties and pH; electrons; photons; mechanical control; use of applied fields; etc. ONR ultimately envisions a molecular level assembly line consisting of one or more multi-tasking machines that uses a given homogeneous or mixed feedstock and, without interruption, produces the desired product - that is our endgame. The goal of this Basic Research Challenge (BRC) is to expand the scope of catalysis. ONR's immediate objectives include: delineating the types of external stimuli that might be used as input to make a switchable catalyst, assessing the thermodynamic and kinetic limits on those inputs, and probing the nature of stereoinduction by catalysts such that a set of rules or guidelines can be created for use by bench chemists and engineers. This basic research challenge focuses on polymer stereoisomerism, but other aspects of polymer synthesis are acceptable. What ONR seeks is a switchable catalyst that enables a product that could not easily be produced by two sequential reactions with different catalysts. Both small molecule synthesis and polymer systems can be pursued, and polymer de-polymerization is likewise acceptable. The team should have 3-5 members and cover the areas of catalyst design (e.g., computational chemistry, informatics, etc.) and preparation, product synthesis, and analysis; if a device is to be included in the project a suitable evaluation program should be included in the proposal.

III. No events are planned

IV. WHITE PAPER SUBMISSION

Although not required, white papers are strongly encouraged for all offerors seeking funding. Each white paper will be evaluated by the Government to determine whether the technology advancement proposed appears to be of particular value to the Department of the Navy. Initial Government evaluations and feedback will be issued via e-mail notification from the Technical Point of Contact. The initial white paper appraisal is intended to give entities a sense of whether their concepts are likely to be funded.

Detailed Full Proposal (Technical and Cost volumes) will be subsequently encouraged from those Offerors whose proposed technologies have been identified through the above referenced e-mail as being of “particular value” to the Government. However, any such encouragement

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does not assure a subsequent award. Full Proposals may also be submitted by any offeror whose white paper was not identified as being of particular value to the Government or any offeror who did not submit a white paper.

For white papers that propose efforts that are considered of particular value to the Navy but either exceed available budgets or contain certain tasks or applications that are not desired by the Navy, ONR may suggest a full proposal with reduced effort to fit within expected available budgets or an effort that refocuses the tasks or application of the technology to maximize the benefit to the Navy.

White papers should not exceed 4 single-sided pages, exclusive of cover page, references, and resume(s) of principal investigator(s), and should be in 12-point Times New Roman font with margins not less than one inch. White papers shall be in Adobe PDF format (preferred) or in Microsoft Word format compatible with MS Office 2007.

The cover page should be labeled “White Paper for ONR 2014 Basic Research Challenge: Multi-Tasking Catalysis. The title page should include the following information: title of the proposed effort, technical point of contact, telephone number, fax numbers, and e-mail address.

The 4-page body of the white paper should include the following information:

- (1) Principal Investigator(s);
- (2) Relevance of the proposed effort to the research areas described in Section II;
- (3) Technical objective of the proposed effort;
- (4) Technical approach that will be pursued to meet the objective;
- (5) A summary of recent relevant technical breakthroughs; and
- (6) A funding plan showing requested funding per fiscal year.

Resume(s) of the principal investigator(s), not to exceed 1 page per principal investigator, should also be included after the 4-page body of the white paper.

White papers shall be submitted to the ONR 332 secure upload site: <https://onroutside.onr.navy.mil/aspprocessor/332Materials/> and using the naming convention specified below.

Please use the following naming convention to ensure routing to the appropriate topic author(s):

- Format: 13-SN-0022_Multi-Tasking Catalysis_ Lipkowitz_WhitePaper_Your Name_DateSubmitted
- Example: 13-SN-0022_ Multi-Tasking Catalysis_ Lipkowitz_WhitePaper _JSmith_23AUG2013

To ensure full, timely consideration for funding, white papers should be submitted no later than 16 SEPT 2013. White papers received after that date will be considered as time and availability of funding permit.

The planned date for completing the review of white papers is 15 OCT 2013.

V. FULL PROPOSAL SUBMISSION AND AWARD INFORMATION

Full proposals should be submitted under upcoming FY 14 Long Range ONRBAA14-001 by 12 NOV 2013. Full Proposals received after that date will be considered as time and availability of funding permit.

ONR anticipates that both grants and contracts will be issued for this effort.

Full proposals for contracts should be submitted in accordance with the requirements of the upcoming FY14 Long Range BAA, ONRBAA14-001. The Technical Content shall be single spaced and not exceed 20 pages. The cover page, resumes, bibliographies, project schedule, and table of contents are excluded in the page count.

Full proposals for contracts shall be submitted to the ONR 332 secure upload site: <https://onroutside.onr.navy.mil/asprocessor/332Materials/> and using the naming convention specified below. Each document should be uploaded individually to the site.

Please use the following naming convention to ensure routing to the appropriate topic author(s):

- Format: 13-SN-0022_ Multi-Tasking Catalysis_ Lipkowitz_Technical Proposal_Your Name_DateSubmitted
- Example: 13-SN-0022_ Multi-Tasking Catalysis_ Lipkowitz_Technical Proposal _JSmith_12NOV2013

Full proposals for grants should be submitted in accordance with the requirements of the upcoming FY14 Long Range BAA, ONRBAA14-001. All full proposals for grants must be submitted through www.grants.gov. The following information must be completed as follows in the SF 424 to ensure that the application is directed to the correct individual for review:

Block 4a, Federal Identifier: Enter “N00014”

Block 4b, Agency Routing Number, Enter the three (3) digit Program Office Code and the Program Officer’s name as shown below:

Topic #1 - “332 (Lipkowitz, Kenny)”

All attachments to the application should also include this identifier to ensure the proposal and its attachments are received by the appropriate Program Office.

ONR plans to fund up to two (2) awards with an approximate value of up to \$700,000/annum per award for a total period of performance of 48 months.

Although ONR expects the above described program plan to be executed, ONR reserves the right to make changes.

Funding decisions should be made by 16 DEC 2013. Selected projects will have an estimated award date of 03 APR 2014.

VI. SIGNIFICANT DATES AND TIMES

Event	Due Date	Time
Recommended White Paper Submission Date	16 SEP 2013	1400 EST
Notification of White Paper Evaluation*	15 OCT 2013	
Recommended Full Proposal Submission	12 NOV 2013	1400 EST
Notification of Selection: Full Proposals *	16 DEC 2013	
Awards *	03 APR 2014	

Note: * These are approximate dates.

VII. POINTS OF CONTACT

In addition to the points of contact listed in ONRBAA13-001, and those that will be listed in the upcoming FY14 Long Range BAA, ONRBAA14-001, the specific points of contact for this announcement are listed below:

Technical Points of Contact:

Dr. Kenny Lipkowitz, Program Officer, Code 332, kenny.lipkowitz@navy.mil
 Alternate Technical Point of Contact Dr. Paul Armistead, Program Officer, Code 332, paul.armistead@navy.mil

Business Point of Contact:

All Topics: Ms. Mary Helen Dent, Contracting Officer, Code 253, mary.dent@navy.mil

VIII. SUBMISSION OF QUESTIONS

Any questions regarding this announcement must be provided to the Technical Points of Contact and/or the Business Point of Contact listed in Section VII above. All questions shall be submitted in writing by electronic mail.

Answers to questions submitted in response to this Special Notice will be addressed in the form of an Amendment and will be posted to the following web pages:

- Federal Business Opportunities (FEDBIZOPPS) Webpage – <https://www.fbo.gov/>
- Grants.gov Webpage – <http://www.grants.gov/>
- ONR Special Notice Webpage - <http://www.onr.navy.mil/Contracts-Grants/Funding-Opportunities/Special-Notices.aspx>

Questions regarding White Papers or Full Proposals should be submitted NLT two weeks before the dates recommended for receipt of White Papers and/or Full Proposals. Questions after these dates may not be answered.