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| **TITLE:** | Developing the Materials and Manufacturing Techniques for Building Advanced Reactor Systems |
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| **DEPARTMENT:** | U.S. Department of Energy/National Energy Technology Laboratory (NETL) |
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| **NETL CONTACT:** | David Maurice, David.Maurice@netl.doe.gov |
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| **DUTY LOCATION:** | Albany, OR |

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| **ACADEMIC LEVEL:** | **X** | PhD |  | MS |  | BS |  | Undergrad |  | Faculty |

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| **POSITION**  **INFORMATION:** | Full Time, annual appointments, renewal up to 5 years |
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| **CLOSING DATE:** | February 28, 2018 |
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| **WHO MAY BE**  **CONSIDERED:** | United States Citizens, LPRs, & Foreign Nationals with appropriate approval which includes F-1 OPT with EAD (STEM extension not valid), J-1 Exchange Visitor, and LPR with EAD |

**SUMMARY:**

A postdoctoral research associate with a strong knowledge base in materials science is sought to participate in the development of processes for the manufacturing of thermal barrier coatings to be used in advanced reactor systems, and in the development and evaluation of the thermal barrier coatings.

The successful candidate will become part of a research team developing new reactor concepts for the processing of coal. The design of modular reactors will be translated into pilot-scale prototypes through advanced materials manufacturing methods, such as additive manufacturing.

The successful candidate will be engaged in the evaluation of both the manufacturing processes for building the reactors, and of the materials utilized in the thermal barrier coatings.

The research associate will conduct research to: (1) evaluate engineered materials and articles made through advanced and/or conventional manufacturing methods, and (2) participate in the refinement of both the engineered materials and the processing requisite to produce them in practical components. The associate will evaluate the performance of the manufactured articles in a reactor environment by designing and conducting laboratory experiments to simulate the appropriate reactor conditions, will apply modeling and materials knowledge to the refinement of processing parameters needed to manufacture the articles, and will develop metrics and processes for the qualification of the engineered materials.

**HOW TO APPLY:**

Applicants should apply through the Oak Ridge Institute for Science and Education (ORISE) program. The ORISE Program provides opportunities for undergraduate students, recent graduates, graduate students, postdoctoral researchers, and faculty researchers to apply classroom knowledge in a real-world setting to learn about NETL Research and Innovation Center’s (R&IC) core mission areas.

* Interested applicants should complete the online application at <http://www.orau.gov/netl/>.
* In the online application **list** David Maurice **as your requested mentor.** This will associate your application with this research posting. Please send a CV to: [david.maurice@netl.doe.gov](mailto:david.maurice@netl.doe.gov).
* If you have additional questions please contact Patricia Adkins-Coliane, [Patricia.adkins-coliane@netl.doe.gov](mailto:Patricia.adkins-coliane@netl.doe.gov), who is the NETL Graduate Education Program Manager.