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Radiation Detection Material Discovery Initiative at PNNL

BRIAN MILBRATH, Pacific Northwest National Laboratory — Today's security threats are being met with 30-year old radiation technology. Discovery of new radiation detection materials is currently a slow and Edisonian process. With heightened concerns over nuclear proliferation, terrorism and unconventional warfare, an alternative strategy for identification and development of potential radiation detection materials must be adopted. Through the Radiation Detection Materials Discovery Initiative, PNNL focuses on the science-based discovery of next generation materials for radiation detection by addressing three "grand challenges": fundamental understanding of radiation detection, identification of new materials, and accelerating the discovery process. The new initiative has eight projects addressing these challenges, which will be described, including early work, paths forward and the opportunities for collaboration.

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