# Dynasil's RMD Subsidiary Awarded Four Phase I Technology Development Grants by U.S. Department of Energy

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NEWTON, Mass., July 27, 2018 /PRNewswire/ -- Dynasil Corporation of America (NASDAQ: DYSL) today announced its Radiation Monitoring Devices subsidiary (RMD) has received four Phase I grants totaling $600,000 under the U.S. Department of Energy's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs.

"RMD continues to be recognized as a world leader in the areas of scintillation, ceramics and augmented reality research," said Peter Sulick, Dynasil's Chairman of the Board, Chief Executive Officer and President. "These awards underscore RMD's pivotal role in applying material science and augmented reality to new detection and analysis methods for high energy physics research, nuclear security and maintenance of the U.S. electric grid."

RMD received Phase I grants in the following areas:

**Augmented Reality for Electric Grid Maintenance** - Maintaining the U.S. electrical grid requires highly skilled labor to complete critical tasks. Rapidly increasing complexity makes it extremely challenging for the workforce to be experts in all the technical aspects and systems of the electrical grid.

RMD is developing a revolutionary technology for grid maintenance based on augmented reality assisted training that integrates planning, management, training and operations aspects of remote maintenance. Our technology will reduce the cost of maintenance, enhance management capabilities, and improve accuracy and speed, while reducing the time and expense of personnel training.

**Photonic Crystals to Improve Scintillator Performance** - Improving scintillator brightness, as well as energy and temporal resolution are essential elements for all radiation detection applications, including nuclear non-proliferation, homeland security, and classification of X-rays, gamma-rays, and neutrons. Historically, increasing brightness requires the development of new scintillator materials, which is a long and expensive process.

RMD is developing an alternative approach that utilizes the novel properties of nanostructures, such as photonic crystals, to increase the amount of light extracted from the scintillator. This approach does not require development of new scintillators, but instead increases the effective brightness, energy resolution, and the timing resolution of scintillators that are available in the market today.

**Ceramic Materials for High Powered Lasers** - Development of high power laser systems is a very challenging task as the high power requirements of the system significantly increases thermal stress within the laser materials. These stresses lead to negative effects such as birefringence, thermal lensing and stress-fractures.

RMD's is developing a laser ceramic material with properties that exceed those currently employed today. We will produce ceramic based Yb-YAG disks with a radial gradient of dopant concentration to minimize thermal gradients, which promises to make possible the construction of high power lasers for nuclear accelerator applications, defense, and industrial use.

**Ultra-Pure Superconducting Sensors** - RMD is developing a method to produce ultra-pure single crystals of superconducting metals that will enable new, higher sensitivity high energy physics experiments to be constructed and deployed. The experiments will make it possible for physicists to better understand the fundamental nature of the matter that makes up our universe. The techniques we are developing can also be applied to other materials to further innovations in nuclear physics studies.

"From the development of devices designed to increase the maintenance efficiency and reliability of the U.S. electrical grid to gamma-ray detectors that enable the next generation of high energy physics studies, to new ceramic materials that will power the next generation of high powered lasers, the Phase I research projects we are embarking on through these SBIR/STTR Programs embody some of the world's most pressing high energy physics and energy production research needs," said Kanai Shah, Ph. D. President of Dynasil's RMD subsidiary. "Dynasil is proud to partner with the Department of Energy on these initiatives."

**About Dynasil**

Dynasil Corporation of America (NASDAQ: DYSL) develops and manufactures optics and photonics products, optical detection and analysis technology and components for the homeland security, medical and industrial markets. Combining world-class expertise in research and materials science with extensive experience in manufacturing and product development, Dynasil is commercializing products including dual-mode radiation detection solutions for Homeland Security and commercial applications and sensors for non-destructive testing. Dynasil has an impressive and growing portfolio of issued and pending U.S. patents. The Company is based in Newton, Massachusetts, with additional operations in Massachusetts, Minnesota, New Jersey, New York and the United Kingdom. More information about the Company is available at www.dynasil.com.

**Safe Harbor**

*This news release may contain forward looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements regarding future events and our future results, including those relating to future Infrared High Efficiency and DLC Coatings sales, are based on current expectations, estimates, forecasts, and projections and the beliefs and assumptions of our management. These forward-looking statements may be identified by the use of words such as "plans", "intends," "may," "could," "expect," "estimate," "anticipate," "continue" or similar terms, though not all forward-looking statements contain such words. The actual results of the future events described in such forward looking statements could differ materially from those stated in such forward looking statements due to a number of important factors. These factors that could cause actual results to differ from those anticipated or predicted include, without limitation, our ability to develop and commercialize our products, the*

*size and growth of the potential markets for our products and our ability to serve those markets, the rate and degree of market acceptance of any of our products, general economic conditions, costs and availability of raw materials and management information systems, our ability to obtain and maintain intellectual property protection for our products, competition, the loss of key management and technical personnel, our ability to obtain timely payment of our invoices to governmental customers, litigation, the effect of governmental regulatory developments, the availability of financing sources, our ability to identify and execute on acquisition opportunities and integrate such acquisitions into our business, and seasonality, as well as the uncertainties set forth in the Company's 2017 Annual Report on Form 10 K, as filed on December 20, 2017 and from time to time in the Company's other filings with the Securities and Exchange Commission. The Company disclaims any intention or obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.*

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