Space Exploration: Oh, the Materials You’ll Need!

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Space exploration has many challenges and materials are critical for many of the systems required to enable robotic or human space exploration. This talk will highlight challenges for materials with an emphasis on thermal protection materials and systems. Solving the materials issues will require thinking about materials in the systems and environments where are they to be used. In many cases the materials must be designed for the application, and the system needs to be designed with the materials in mind. The talk will conclude with some thoughts on the skills needed for materials scientists and engineers working on materials for space.