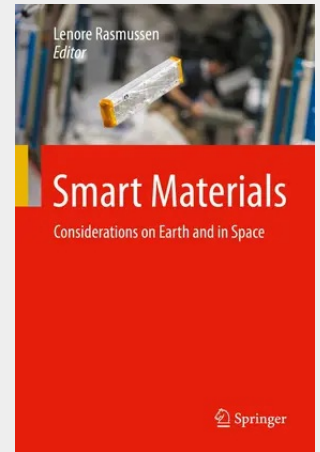


Smart Materials

Considerations on Earth and in Space

This book provides in-depth coverage of smart materials, including electroactive polymers (EAPs), synthetic muscle, pneumatic artificial muscle, soft pneumatics, hydro-muscle, and other cutting-edge transformational smart material technologies. It looks at ways smart materials respond to stimuli, such as electricity, pressure, temperature, magnetism, or light. State-of-the-art developments in EAP based actuation and pneumatics are covered, including nanotechnology, soft robotics, EAP considerations for NASA applications and thermal control of satellites, control of mirrors using dielectric elastomeric actuators, and biomimetic design and function in robotics and prosthetics. A detailed analysis of the challenges of smart materials on Earth and in space is included, with an interview about considerations and training for Missions to Moon and Mars. This book is a must-read within the smart material and space communities, from tech savvy students to industry professionals.

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