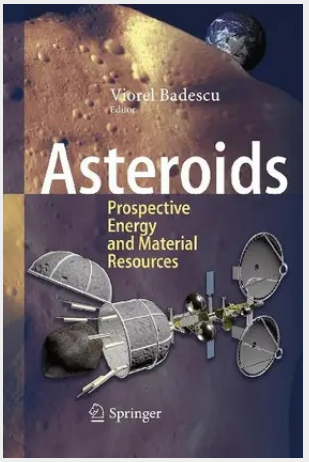
Badescu

Asteroids

Prospective Energy and Material Resources



The Earth has limited material and energy resources while these resources in space are virtually unlimited. Further development of humanity will require going beyond our planet and exploring of extraterrestrial resources and sources of unlimited power. Thus far, all missions to asteroids have been motivated by scientific exploration. However, given recent advancements in various space technologies, mining asteroids for resources is becoming ever more feasible. A significant portion of asteroids value is derived from their location; the required resources do not need to be lifted at a great expense from the surface of the Earth. Resources derived from Asteroid not only can be brought back to Earth but could also be used to sustain human exploration of space and permanent settlements in space. This book investigates asteroids' prospective energy and material resources. It is a collection of topics related to asteroid exploration, and utilization. It presents past and future technologies and solutions to old problems that could become reality in our life time. The book therefore is a great source of condensed information for specialists involved in current and impending asteroid-related activities and a good starting point for space researchers, inventors, technologists and potential investors. Written for researchers, engineers, and businessmen interested in asteroids' exploration and exploitation. Keywords: Asteroids, Asteroid exploration, Asteroid exploitation, Energy sources, Space Resources, Material Resources, In-Situ Resource Utilization, Mining

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