



## Thermal and Environmental Barrier Coatings for Advanced Propulsion Engine Systems

By -

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 22 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. Ceramic thermal and environmental barrier coatings (TEBCs) are used in gas turbine engines to protect engine hot-section components in the harsh combustion environments, and extend component lifetimes. For future high performance engines, the development of advanced ceramic barrier coating systems will allow these coatings to be used to simultaneously increase engine operating temperature and reduce cooling requirements, thereby leading to significant improvements in engine power density and efficiency. In order to meet future engine performance and reliability requirements, the coating systems must be designed with increased high temperature stability, lower thermal conductivity, and improved thermal stress and erosion resistance. In this paper, ceramic coating design and testing considerations will be described for high temperature and high-heat-flux engine applications in hot corrosion and oxidation, erosion, and combustion water vapor environments. Further coating performance and life improvements will be expected by utilizing advanced coating architecture design, composition optimization, and improved processing techniques, in conjunction with modeling and design tools. This item ships from La Vergne, TN. Paperback.



**READ ONLINE**  
[ 8.75 MB ]

### Reviews

*Unquestionably, this is the best operate by any article writer. It is really basic but surprises from the 50 % of the ebook. I realized this ebook from my i and dad suggested this ebook to discover.*

-- **Kacie Schroeder**

*This pdf could be well worth a read through, and a lot better than other. It is amongst the most incredible publication i have got read through. I discovered this book from my dad and i recommended this publication to discover.*

-- **Sadye Hill**