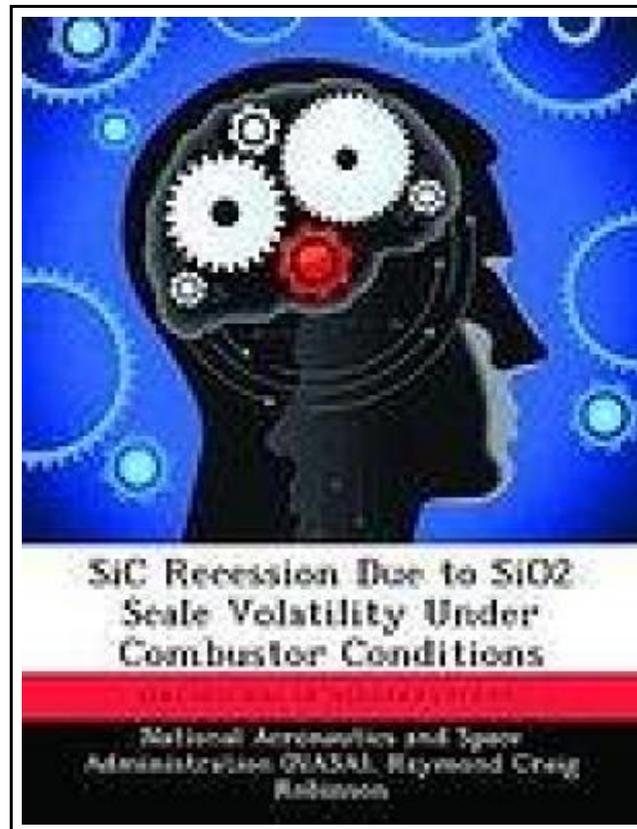


SiC Recession Due to SiO₂ Scale Volatility Under Combustor Conditions



Filesize: 9.67 MB

Reviews

This publication is great. It is full of wisdom and knowledge You will not really feel monotony at at any time of the time (that's what catalogs are for relating to when you ask me).

(Dr. Everett Dicki DDS)

SIC RECESSION DUE TO SIO₂ SCALE VOLATILITY UNDER COMBUSTOR CONDITIONS



To download **SiC Recession Due to SiO₂ Scale Volatility Under Combustor Conditions** PDF, remember to follow the button under and download the ebook or have access to additional information that are related to SIC RECESSION DUE TO SIO₂ SCALE VOLATILITY UNDER COMBUSTOR CONDITIONS ebook.

Biblioscholar Mrz 2013, 2013. Taschenbuch. Book Condition: Neu. 246x189x6 mm. This item is printed on demand - Print on Demand Neuware - One of today's most important and challenging technological problems is the development of advanced materials and processes required to design and build a fleet of supersonic High Speed Civil Transport (HSCT) airliners, a follow-up to the Concorde SST. The innovative combustor designs required for HSCT engines will need high-temperature materials with long-term environmental stability. Higher combustor liner temperatures than today's engines and the need for lightweight materials will require the use of advanced ceramic-matrix composites (CMC's) in hot-section components. The HSCT is just one example being used to demonstrate the need for such materials. This thesis evaluates silicon carbide (SiC) as a potential base material for HSCT and other similar applications. Key issues are the environmental durability for the materials of interest. One of the leading combustor design schemes leads to an environment which will contain both oxidizing and reducing gas mixtures. The concern is that these environments may affect the stability of the silica (SiO₂) scale on which SiC depends for environmental protection. A unique High Pressure Burner Rig (HPBR) was developed to simulate the combustor conditions of future gas turbine engines, and a series of tests were conducted on commercially available SiC material. These tests are intended as a feasibility study for the use of these materials in applications such as the HSCT. Linear weight loss and surface recession of the SiC is observed as a result of SiO₂ volatility for both fuel-lean and fuel-rich gas mixtures. These observations are compared and agree well with thermogravimetric analysis (TGA) experiments. A strong Arrhenius-type temperature dependence exists. In addition, the secondary dependencies of pressure and gas velocity are defined. As a result, a model is developed to enable...



[Read SiC Recession Due to SiO₂ Scale Volatility Under Combustor Conditions Online](#)



[Download PDF SiC Recession Due to SiO₂ Scale Volatility Under Combustor Conditions](#)

Other Kindle Books



[PDF] Fun to Learn Bible Lessons Preschool 20 Easy to Use Programs Vol 1 by Nancy Paulson 1993 Paperback

Follow the link below to download "Fun to Learn Bible Lessons Preschool 20 Easy to Use Programs Vol 1 by Nancy Paulson 1993 Paperback" PDF document.

[Download eBook »](#)



[PDF] Games with Books : 28 of the Best Childrens Books and How to Use Them to Help Your Child Learn - From Preschool to Third Grade

Follow the link below to download "Games with Books : 28 of the Best Childrens Books and How to Use Them to Help Your Child Learn - From Preschool to Third Grade" PDF document.

[Download eBook »](#)



[PDF] Games with Books : Twenty-Eight of the Best Childrens Books and How to Use Them to Help Your Child Learn - from Preschool to Third Grade

Follow the link below to download "Games with Books : Twenty-Eight of the Best Childrens Books and How to Use Them to Help Your Child Learn - from Preschool to Third Grade" PDF document.

[Download eBook »](#)



[PDF] Environments for Outdoor Play: A Practical Guide to Making Space for Children (New edition)

Follow the link below to download "Environments for Outdoor Play: A Practical Guide to Making Space for Children (New edition)" PDF document.

[Download eBook »](#)



[PDF] Kindergarten Culture in the Family and Kindergarten; A Complete Sketch of Froebel s System of Early Education, Adapted to American Institutions. for the Use of Mothers and Teachers

Follow the link below to download "Kindergarten Culture in the Family and Kindergarten; A Complete Sketch of Froebel s System of Early Education, Adapted to American Institutions. for the Use of Mothers and Teachers" PDF document.

[Download eBook »](#)



[PDF] Two Treatises: The Pearle of the Gospell, and the Pilgrims Profession to Which Is Added a Glasse for Gentlewomen to Dresse Themselves By. by Thomas Taylor Preacher of Gods Word to the Towne of Reding. (1624-1625)

Follow the link below to download "Two Treatises: The Pearle of the Gospell, and the Pilgrims Profession to Which Is Added a Glasse for Gentlewomen to Dresse Themselves By. by Thomas Taylor Preacher of Gods Word to the Towne of Reding. (1624-1625)" PDF document.

[Download eBook »](#)