Tribology Issues and Opportunities in MEMS: Proceedings of the NSF/AFOSR/ASME Workshop on Tribology Issues and Opportunities in Mems Held in Columbus, Ohio, U.S.A., 9-11 November 1997

By -

Springer, Netherlands, 2012. Paperback. Book Condition: New. 240 x 160 mm. Language: English . Brand New Book. Micro Electro Mechanical Systems (MEMS) is already about a billion dollars a year industry and is growing rapidly. So far major emphasis has been placed on the fabrication processes for various devices. There are serious issues related to tribology, mechanics, surfacechemistry and materials science in the operationand manufacturingof many MEMS devices and these issues are preventing an even faster commercialization. Very little is understood about tribology and mechanical properties on micro- to nanoscales of the materials used in the construction of MEMS devices. The MEMS community needs to be exposed to the state-of-the-artoftribology and vice versa. Fundamental understanding of friction/stiction, wear and the role of surface contamination and environmental debris in micro devices is required. There are significantadhesion, friction and wear issues in manufacturing and actual use, facing the MEMS industry. Very little is understood about the tribology of bulk silicon and polysilicon films used in the construction ofthese microdevices. These issues are based on surface phenomenaand cannotbe scaled down linearly and these become increasingly important with the small size of the devices. Continuum theory

Reviews

This publication could be worthy of a study, and superior to other. it was writtern extremely perfectly and beneficial. I am just easily could possibly get a delight of reading through a published pdf.
-- Prof. Bernie Torphy

I just started off reading this article ebook. It is actually writter in basic words and not confusing. I am just very happy to let you know that this is the best ebook i actually have read through inside my individual daily life and can be he finest ebook for possibly.
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