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Nanodevices and Reliability

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Abstract
The paper takes a fresh look at lessons learned and where things stand today, along with prospects for a bright future. The MEMS industry is currently at a much more vulnerable position than it appears, regardless of how wonderful its future may look like. A full understanding of the physics and statistics of the defect generation is required to investigate the ultimate reliability limitations for nanodevices. Biggest challenge: cost effective, high volume production.

Keywords: Carbon nanotubes (CNT), CMOS, defect rate, fabrication, failure analysis, MEMS/MEOMS, nanodevices, NEMS, packaging, reliability.

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