MEMS Bio Has a Wide Range of Applications in Environmental and Drug Screening and DNA Fragmentation

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Note: MEMSs include small mechanical structures , micro-sensors, microactuators, and microelectronics all integrated into the same silicon chip shape .

In designing MEMS systems, when ICs are designed to utilize the electrical properties of silicon , MEMS either derives from the mechanical properties of silicon or from both the electrical and mechanical properties of silicon . Microsensors make changes to the system by obtaining information on mechanical, thermal, magnetic, chemical, or electromagnetic phenomena . MEMS devices are very small, their components usually

microscopic. The levers, clutches and pistons are well made by engines and even steam turbines by MEMS.



Figure 1: MEMS Technology and Nano- Microelectronics Techniques

Internal Order of MEMS Technology and Nano- Microelectronics Techniques

MEMS is a structural technology, an example of the design and development of sophisticated, well integrated electronics systems and mechanical devices utilizing single-stage manufactur-

ing techniques . Techniques for making the MEMS enables the components and equipment with performance and increased production are combined with the advantages of the ordinary, such as reducing the size of the physical volume, weight and cost and providing a basis for the production of non-manufacturing methods, the other is the reality of internal order Technology MEMS and its micro-machining techniques are well versed in its application to an unprecedented range of MEMS devices over previous dependent fields (for example Biology and Microelectronics) These agents make MEMS far more comprehensive than IC microchips technology .



Figure 2: New MEMS-Bio applications

New MEMS-Bio applications :

MEMS Bio has a wide range of applications in environmental and drug screening and DNA fragmentation. Its new technology is based on microfluidic systems that are capable of analyzing small volumes of liquids and are therefore used in the medical device manufacturing industry. MEMS integrates and integrates mobile micro-devices (such as actuators and sensors), energy-efficient micro-devices (such as antennas, microstructures and coils), micron-scale actuator sensors, and integrated control processing panels . Be.

Note: MEMS is in the field of silicon integration products based on the proliferation of MEMS technology and microelectronics and micromachines to enable the full realization of "systems on a chip". Micro-electromechanical systems (MEMS) (silicon-based mechanical elements, sensors, actuators and electronic devices) are manufactured using micron-size technology, as long as the equipment is micron-sized.

Electronics for use in the circuits complex (IC) are made (such as process components), "BICMOS, Bipolar, CMOS create micro" for use in the process of micromachines compatible and suitable for those who pick episode to episode Used with silicone tablets to add new construction layers to form mechanical and electromechanical devices.

(Wesley, 2024)

(Rashid, 2024)

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