

Mems for Biomedical Applications. 1st Edition / Editor(s) : [Bhansali](#) & [Vasudev](#)

ISBN: 9780857091291

Table of contents

Part 1 Fundamentals of MEMS for biomedical applications:

Microfabrication of polymers for bioMEMS;

Review of sensor and actuator mechanisms for bioMEMS.

Part 2 MEMS for biomedical sensing and diagnostic applications:

MEMS for in vivo sensing;

MEMS and electrical impedance spectroscopy (EIS) for non-invasive measurement of cells;

MEMS ultrasonic transducers for biomedical applications;

Lab-on-chip (LOC) devices and microfluidics for biomedical applications.

Part 3 MEMS for tissue engineering and clinical applications:

Fabrication of cell culture microdevices for tissue engineering applications;

MEMS manufacturing techniques for tissue scaffolding devices;

BioMEMS for drug delivery applications;

Applications of MEMS technologies for minimally invasive medical procedures;

Smart Microgrippers for bioMEMS applications;

Microfluidic techniques for the detection, manipulation and isolation of rare cells.

Part 4 Emerging biomedical applications of MEMS:

MEMS as implantable neuroprobes;

MEMS as ocular implants;

Cellular microinjection for therapeutics and research applications;

Hybrid MEMS: Integrating inorganic structures into live organisms.