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**DESCRIPTION**

*Microelectronic Engineering* has an open access mirror journal *Micro and Nano Engineering*, sharing the same aims and scope, editorial team, submission system and rigorous peer review.

*Microelectronic Engineering* is the premier **nanoprocessing**, and **nanotechnology** journal focusing on fabrication of electronic, photonic, bioelectronic, electromechanic and fluidic devices and systems, and their applications in the broad areas of electronics, photonics, energy, life sciences, and environment. It covers also the expanding interdisciplinary field of "more than Moore" and "beyond Moore" integrated nanoelectronics / photonics and micro-/nano-/bio-systems. Through its unique mixture of peer-reviewed articles, reviews, accelerated publications, short and Technical notes, and the latest research news on key developments, *Microelectronic Engineering* provides comprehensive coverage of this exciting, interdisciplinary and dynamic new field for researchers in academia and professionals in industry.

The journal addresses the following topics and considers mostly experimental work, or theoretical / simulation work directly linked and supporting experiments in the fields: Microelectronics processing & materials (Lithography, Self-assembly, Plasma Processing, Metallization, 3D Integration, Related Materials.) Micro-/Nano-engineering / fabrication / technology / manufacturing Nanoelectronic and photonic devices and their fabrication Microsystems, microdevices (e.g., sensors and nanoenergy devices) and their fabrication Microfluidics, life science devices / sensors, as well as integrated Lab-on-a-chip and their fabrication.

In detail the topics covered are as follows:

1. **Nanolithography and Nanopatterning**: Optical Lithography Electron Optical Methods and Systems X-ray Optical Methods and Systems Resists Limits of Nanolithography Nanoimprint Lithography EUV Lithography and Masks Charged Particle Based Lithography and Patterning Nanoimprint Lithography Techniques and Templates Maskless Lithography Emerging Nanopatterning Methods Limits of Nanopatterning

2. **Pattern Transfer** Ion Technology Plasma Processing Transfer of Pattern with Other Methods Plasma Etching Plasma Nanotechnology Plasma / beam Nanopatterning Plasma Surface Modification of Devices Wet transfer methods
3. Materials  Metallization and Barrier Materials Silicon on Insulators Dielectrics (low K and high K) Interconnects New Resist Materials Nanomaterials for Device Fabrication Block Copolymers Polymers and Flexible Substrates Layered (2D) Materials and Related Transferring Techniques


Micro and Nano Fluidic Devices Pumping / valving devices Mixing devices Separation devices Microreactors Sample preparation devices Fluidic interfaces and integration

Miniaturized Devices for Biology, Chemistry, Medicine Biosensors Chemical sensors Biomimetic properties incorporated into devices Bioelectronic devices Micro / nano / bio interface and interconnection devices

Lab-on-a-chip, bioMEMS, microTAS DNA / protein chips Cell on chip Organ on chip Biomimetic properties incorporated into systems Bioanalytic, diagnostic systems Microseparation, pretreatment systems On-chip detection systems Environmental and food monitoring systems Microreactors

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AUDIENCE

Scientists and engineers in industry and academia involved in micro and nanoelectronics.

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INTRODUCTION

The aim of Microelectronic Engineering is to bring together in one publication the results of international work in the rapidly expanding field of integrated microelectronics.

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| 104[NaCl]/mol l⁻¹ | 4.2  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5</td>
<td>0.26</td>
</tr>
</tbody>
</table>

rather than:

| [NaCl]/mol l⁻¹ | 4.2 x 10⁻⁴  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5 x 10⁻⁴</td>
<td>2.6 x 10⁻⁵</td>
</tr>
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