

MAGyICs

The MAGyICs research group has strong competence in developing ultra-high total dose radiation tolerant IC's. The group conducts its research within the cooperation of the University of Leuven (KUL) and the Belgium Nuclear Research Centre (SCK-CEN). Since its creation in 2008, the university group has delivered many projects for SCK-CEN and ITER.

Expertise:

- Radiation-tolerant electronic solutions for sensor readout systems in harsh environments
- MGy Radiation tolerant time-of-flight measurement systems

Services:

- Irradiation experiment assistance
- Design service and consultancy in radiation-tolerant microelectronics

MAGyICs Designs:

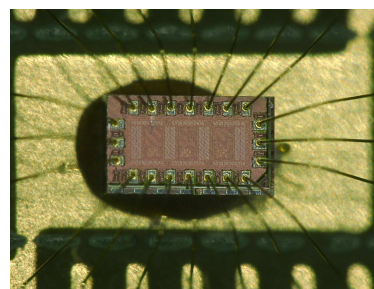
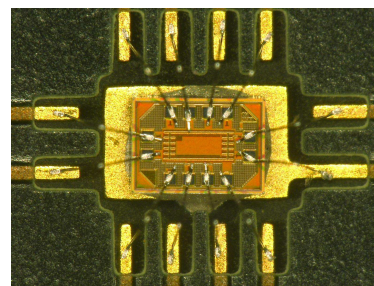
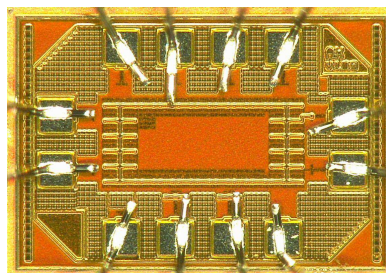
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|--|--------------|
| - 155 Mb/s VCSEL Driver | 5 MGy |
| 255 MHz-BW 90 dBΩ Gain Transimpedance Amplifier | 4 MGy |
| - Time-to-Digital Converter with 5.6 ps Resolution | 5 MGy |
| - 130 nm CMOS Bandgap Ref. with a TC of 15 ppm/°C | 4 MGy |
| - 22 nV/√Hz Instrumentation Amplifier in 130 nm CMOS | 1 MGy |
| - 17-bit Delta-Sigma ADC in 130 nm CMOS | 1 MGy |

Applications:

- System remote handling in nuclear reactors
- Nuclear reactor dismantling robotics
- Radiation dosimetry
- Space instrumentation
- Particle detectors



MGy Radiation Tolerant IC's



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