

**ROCHESTER INSTITUTE OF TECHNOLOGY
MICROELECTRONIC ENGINEERING**

MEMS 2012

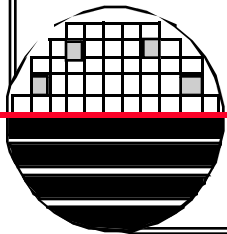
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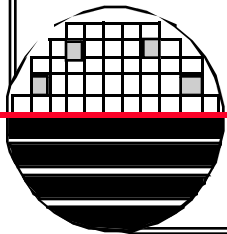
Dr. Fuller's Webpage: <http://www.people.rit.edu/lffeee>

MicroE Webpage: <http://www.microe.rit.edu>



OUTLINE

Projects
MEMS Chip Designs
Resistors
Diodes
Pressure Sensor
Gas Flow Sensor
Multisensor
1-Axis Accelerometer
3-Axis Accelerometer
Temperature & Chemical Probe
Thermopile
Peltier Heat Pump



PROJECTS

Chip Designs for MEMS Fabrication Class

New MEMS Devices

Micro Bolometer / Sensor or Imager

MEMS Switches

MEMS Resonator / Filter / Switch

MEMS Surface Micromachine Process

Energy Harvesting

Energy Source

Electromagnetic

Photovoltaic

Piezoelectric

Testing of John Galt CMOS Chips

PCB Packages for MEMS and CMOS

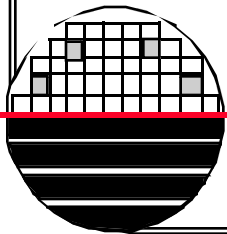
Process Development

Lam 4600 as Silicon Etcher

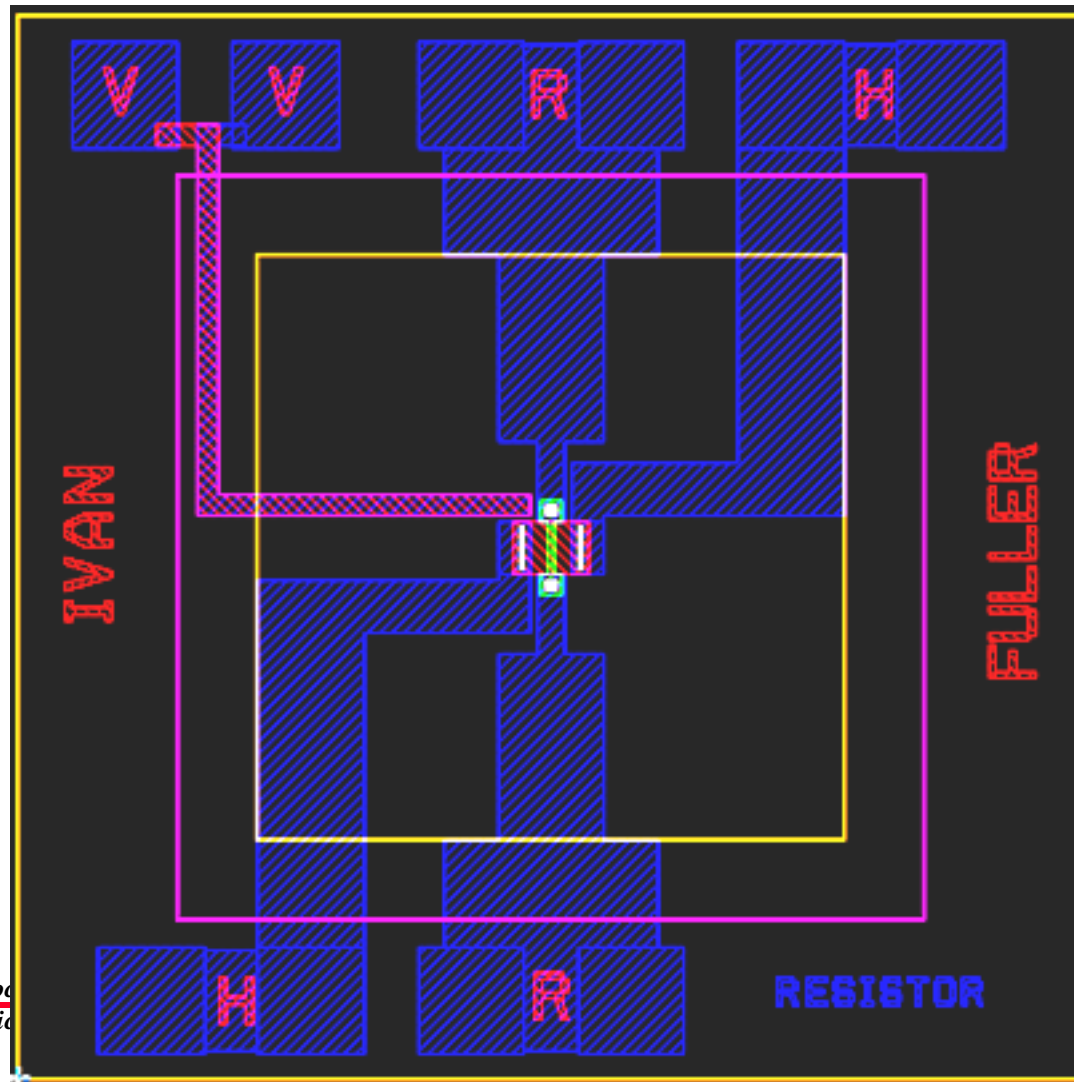
Wireless Sensor Network

Research Projects Dr. WatSen, PRISM, Oil Quality

ISFETs

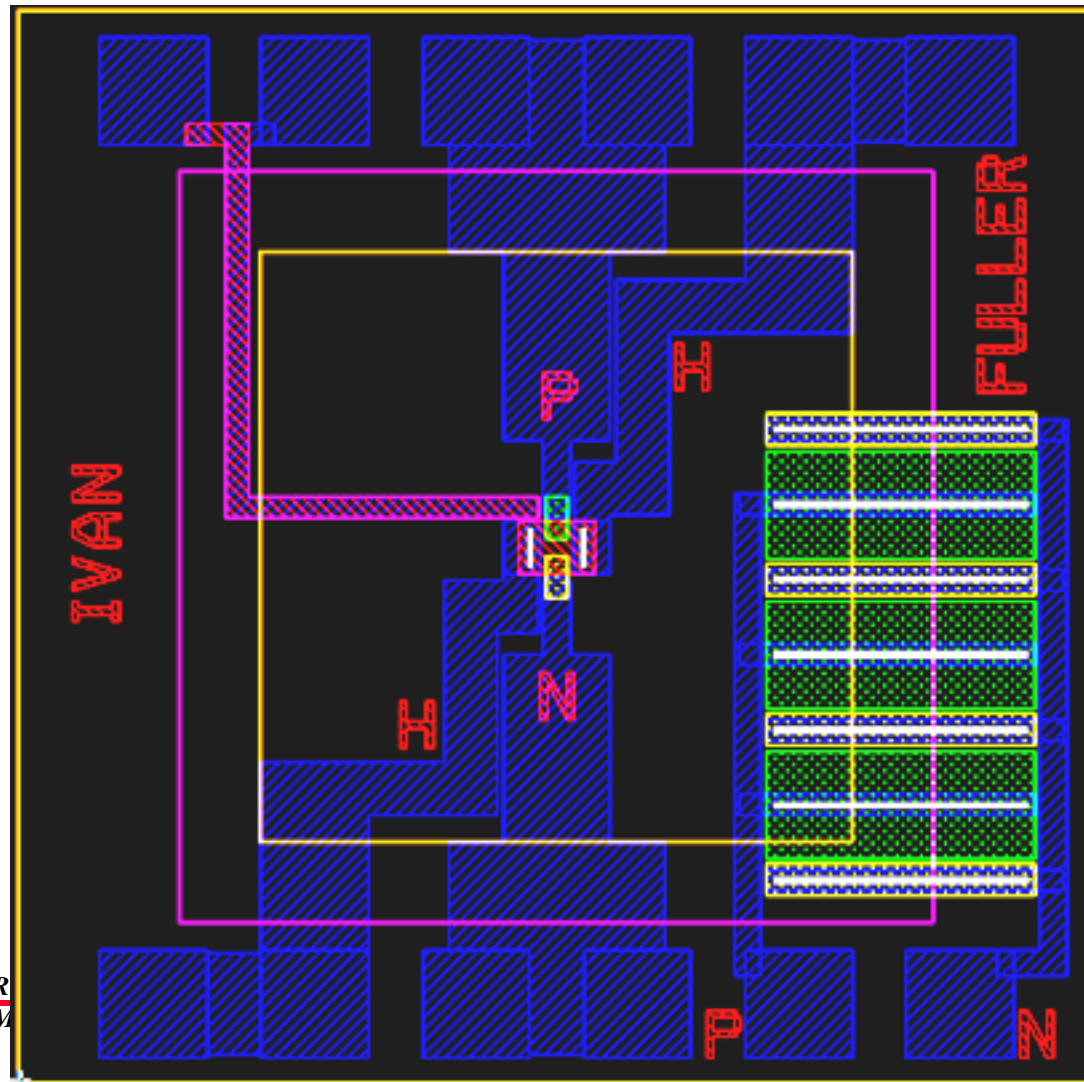


RESISTORS

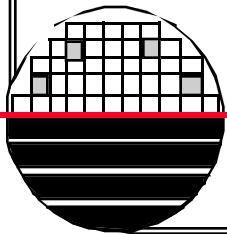
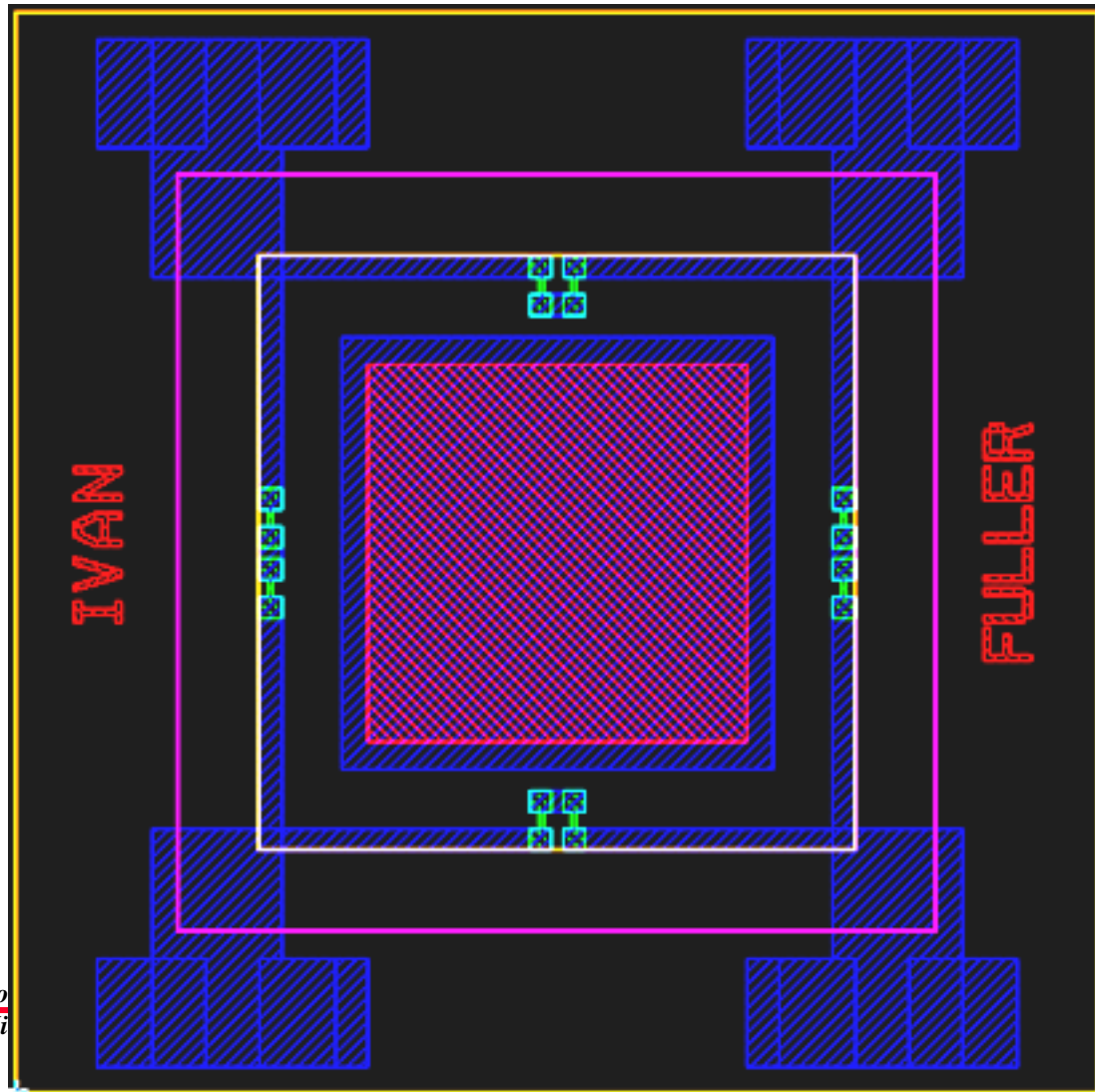


Ro
Mid

DIODES

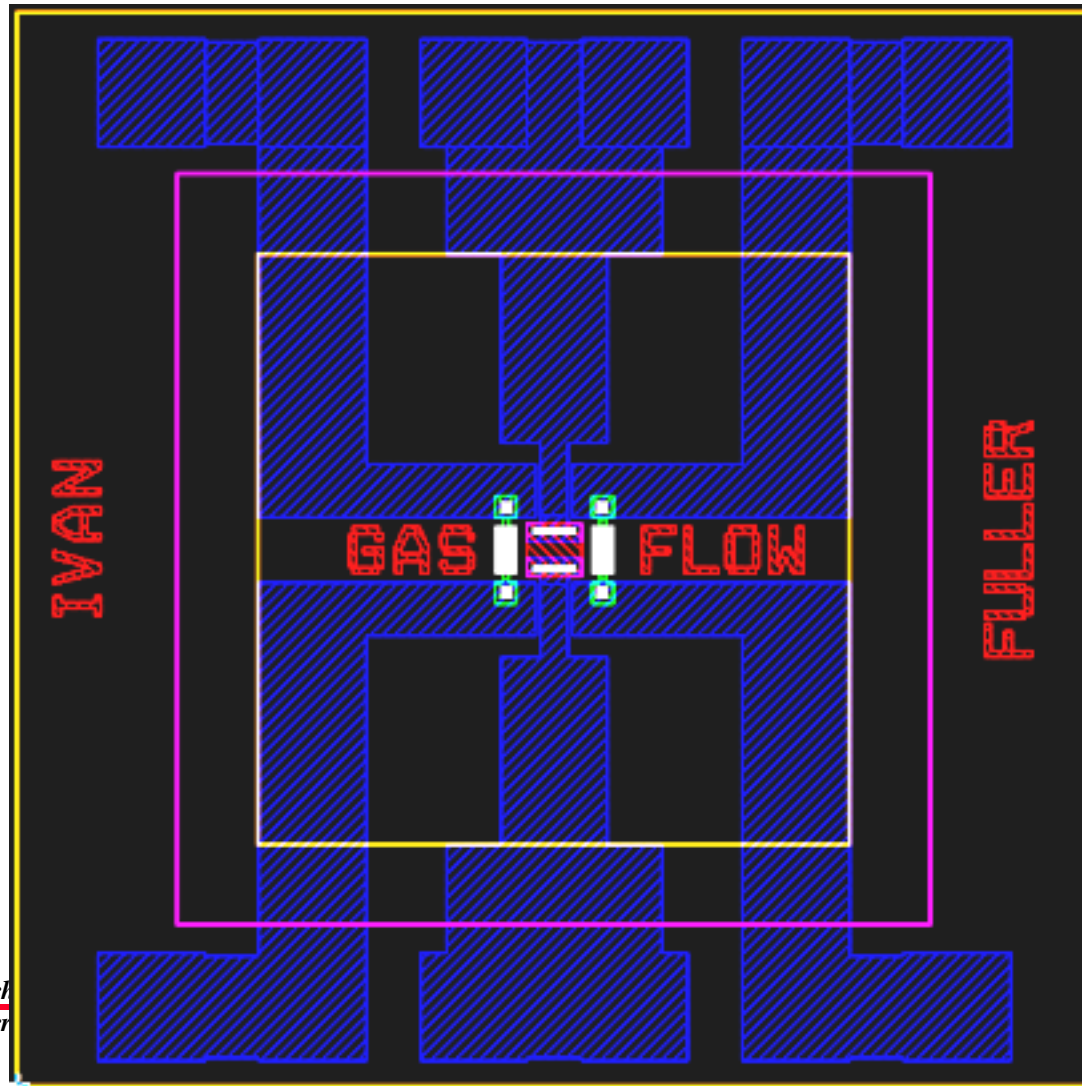


PRESSURE SENSOR



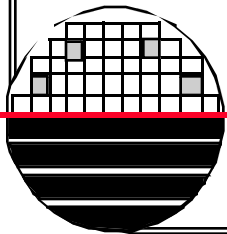
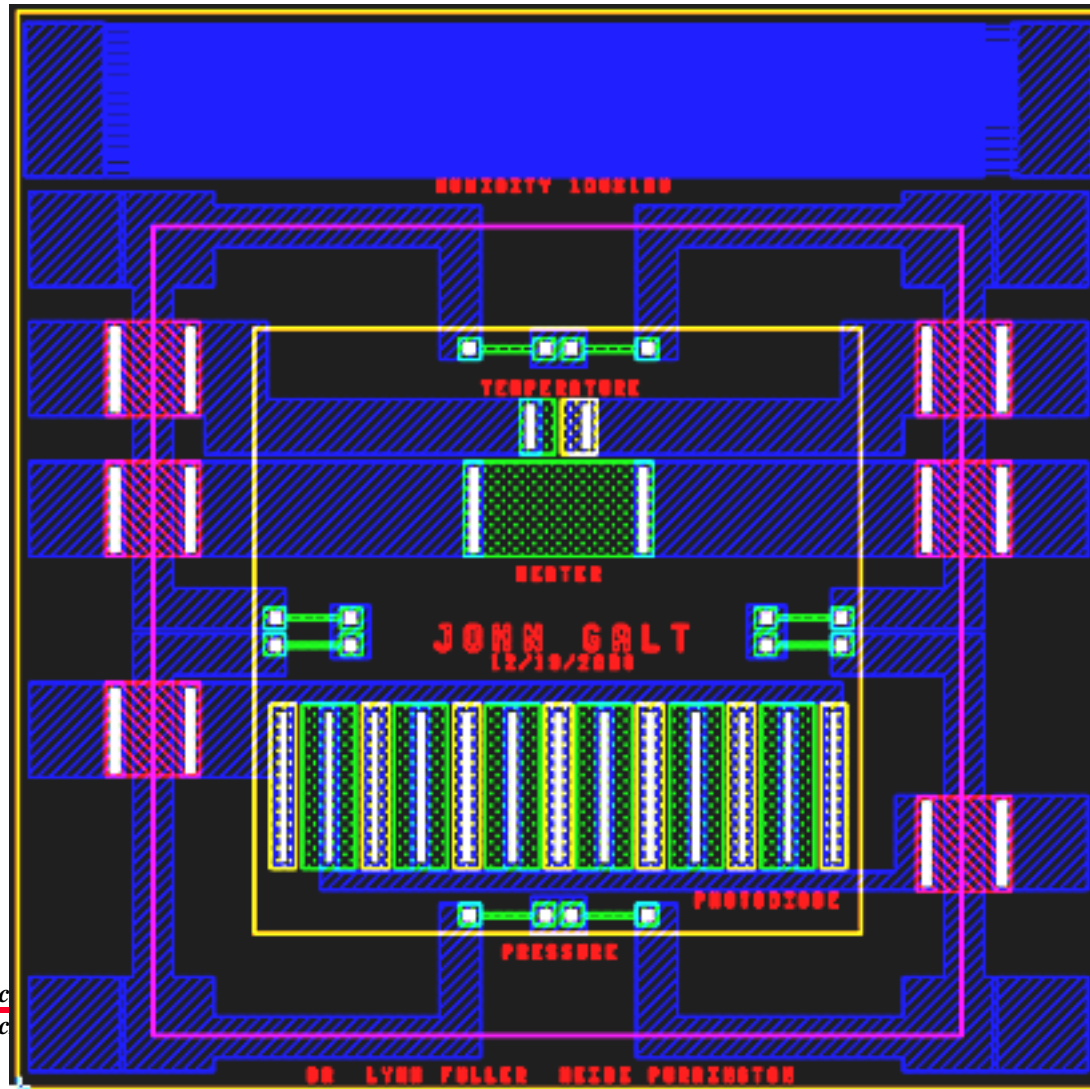
Ro
Mi

GAS FLOW SENSOR



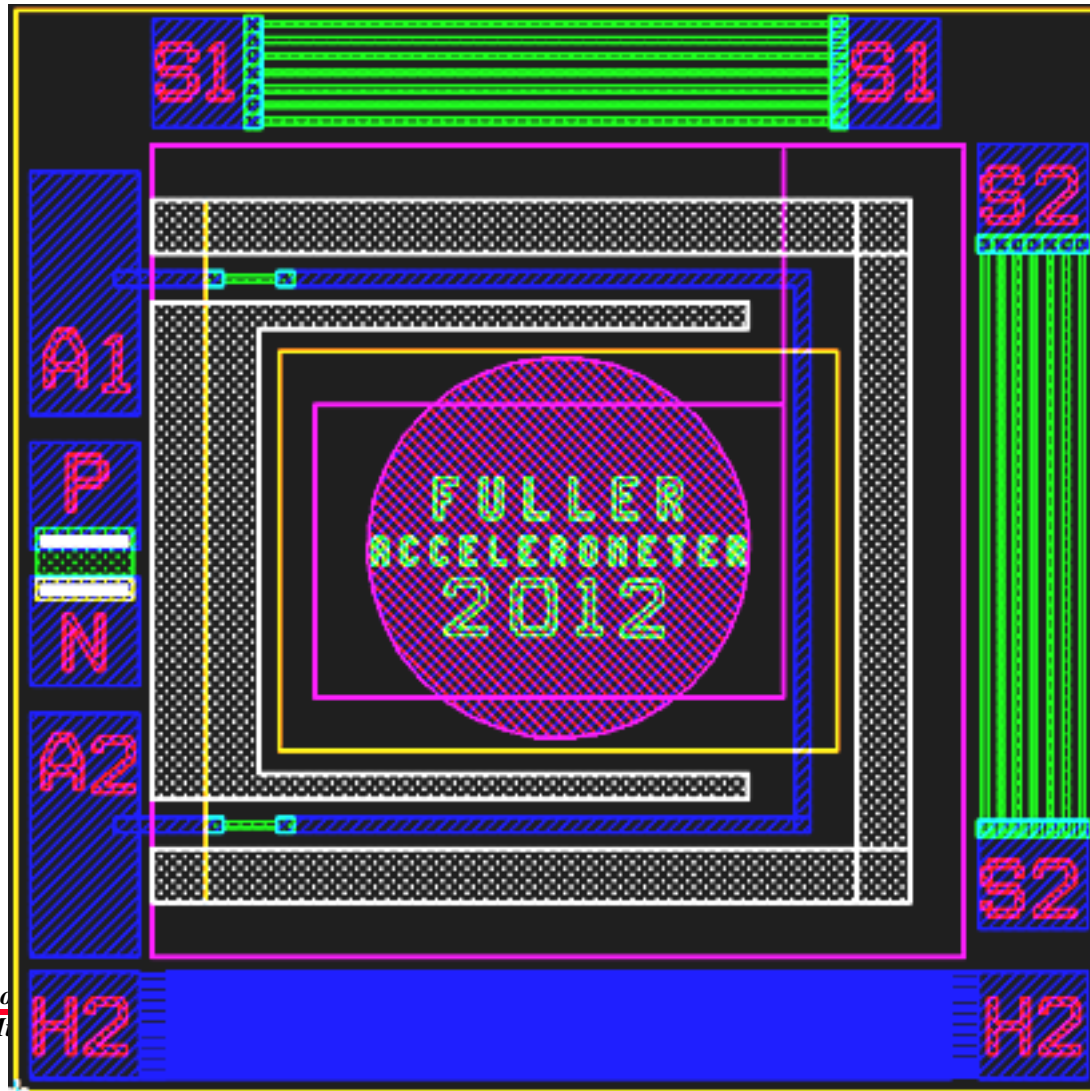
Roch
Micr

MULTISENSOR



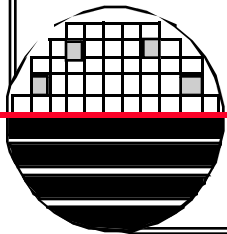
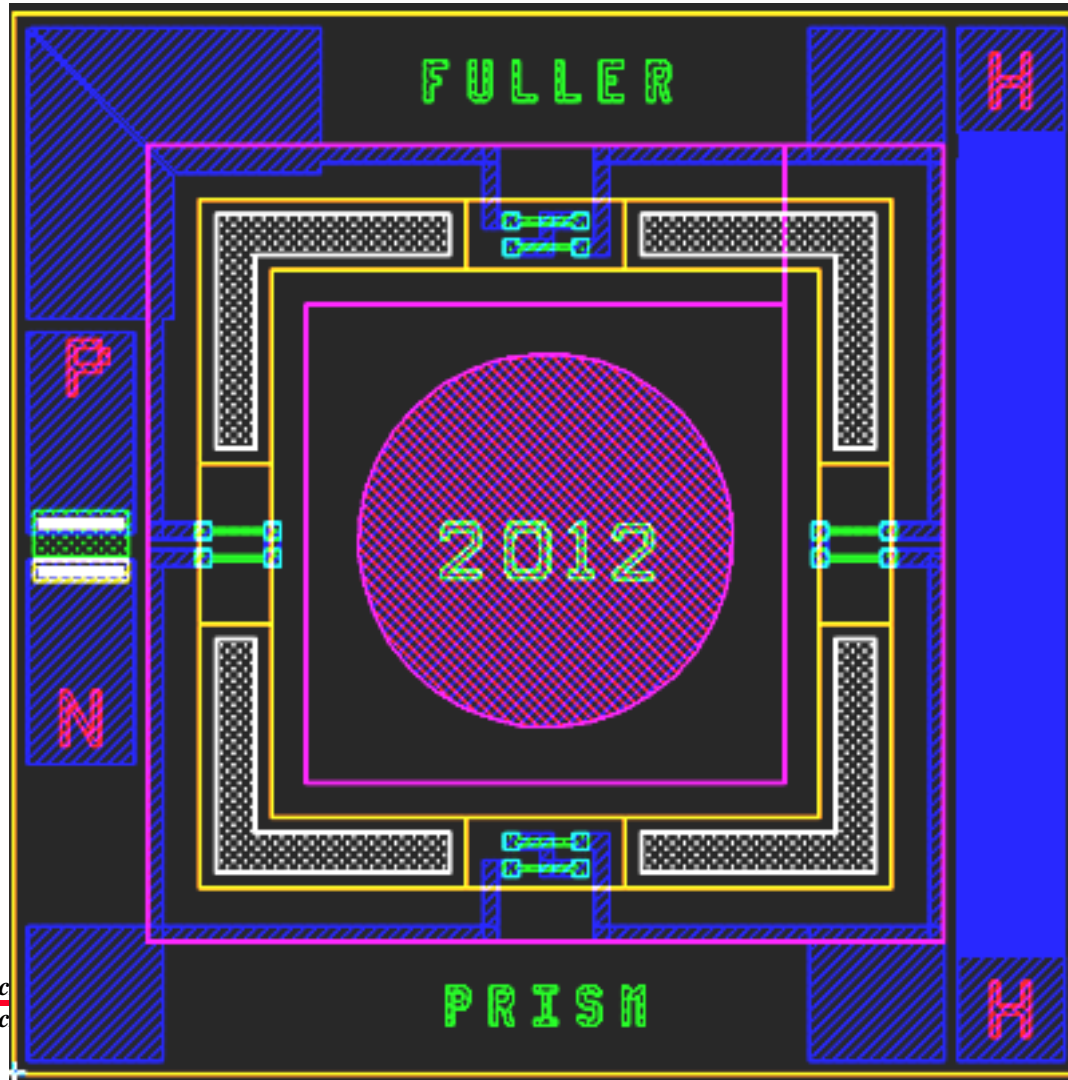
Rock
Mic

1 AXIS ACCELEROMETER



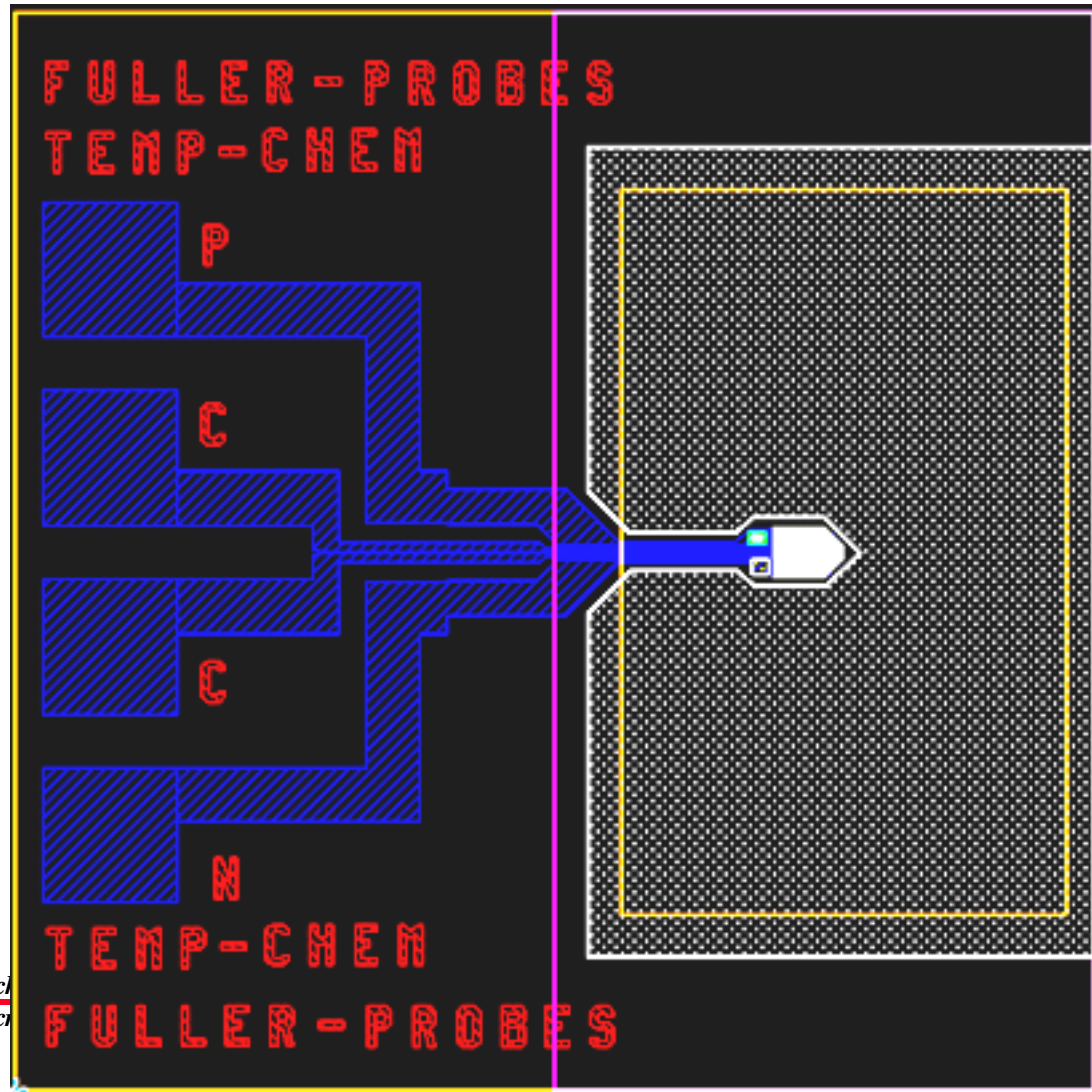
Rd
M

3-AXES ACCELEROMETER



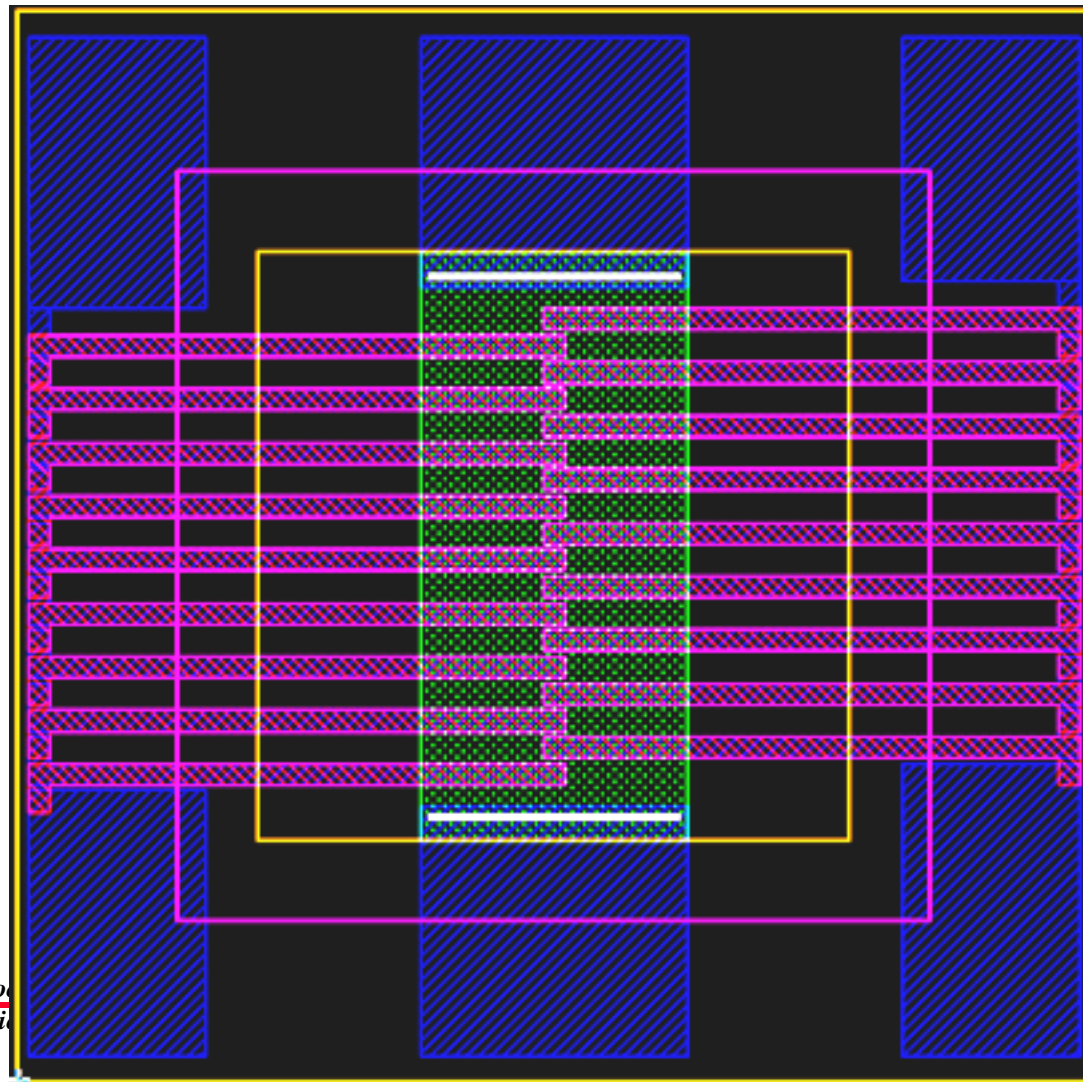
Roc
Mic

TEMPERATURE AND CHEMICAL SENSOR PROBE



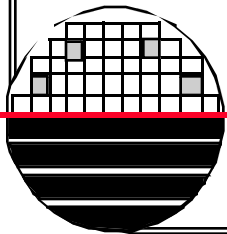
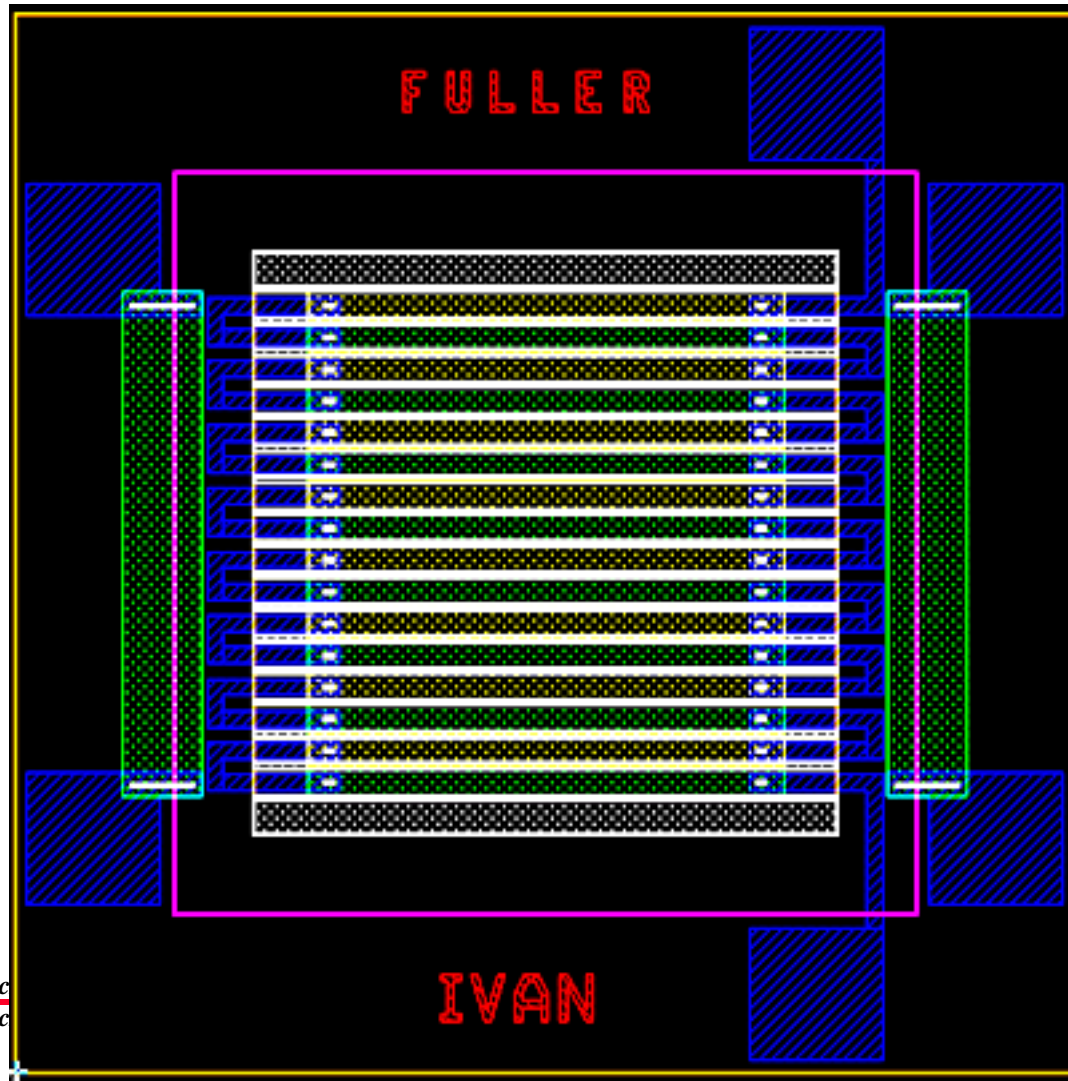
*Rock
Mich*

THERMOPILE (SEEBECK EFFECT)



Ro
Mi

PELTIER EFFECT HEAT PUMP



Roc
Mic