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Partners

- 1. Politechnika Warszawska, Warszawa
- 2. Instytut Technologii Elektronowej, Warszawa
- 3. Politechnika Łódzka, Łódź
- 4. VTT, Espoo , Finland
- 5. Centre National de la Recherche Scientifique (LAAS –CNRS) Toulouse, France
- 6. MICROSENS S.A., Neuchatel, Switzerlad
- 7. Universitat Polytechnica de Catalunya, Barcelona, Spain
- 8. Institut fuer Wasservosorge, Gewaesserekologie und Abfallwirtschaft, Vienna, Austria
- 9. Systea, Rome, Italy

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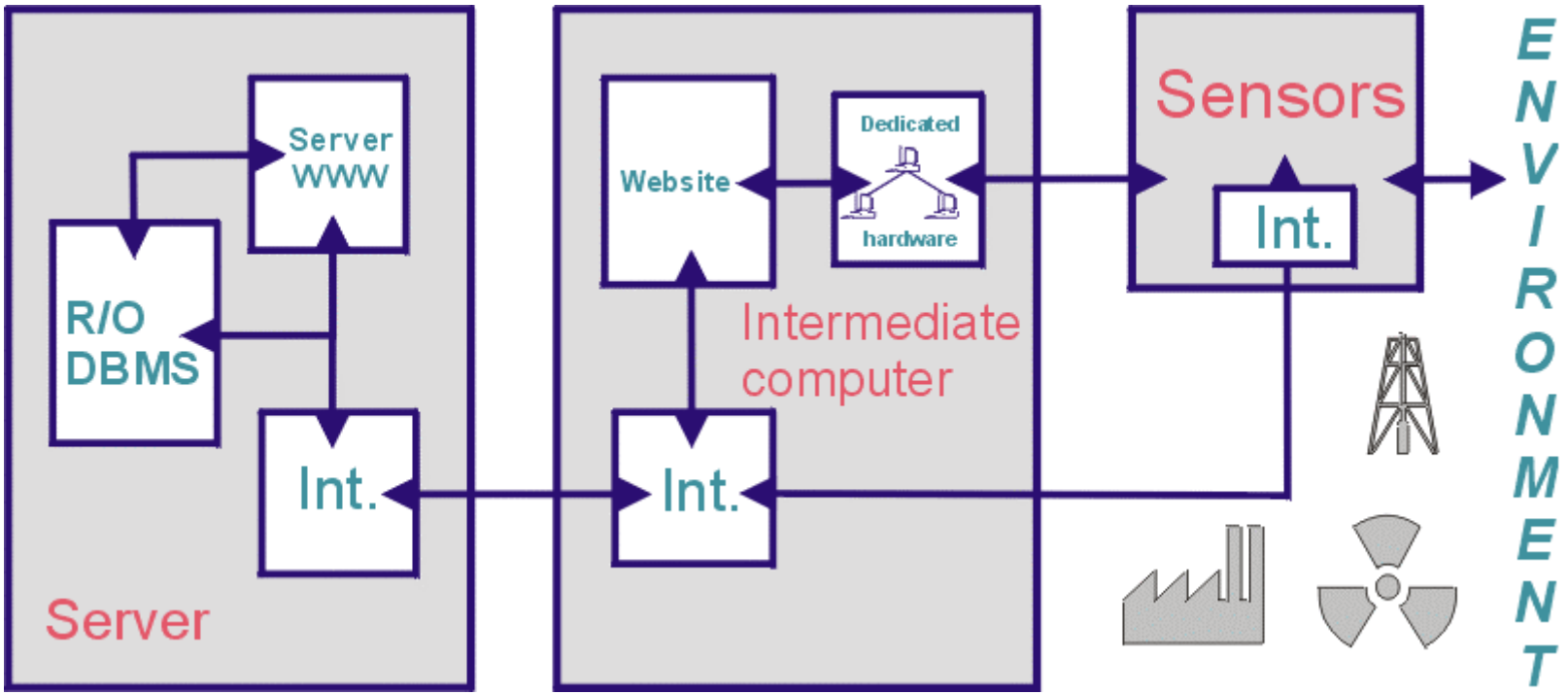
Block diagram:



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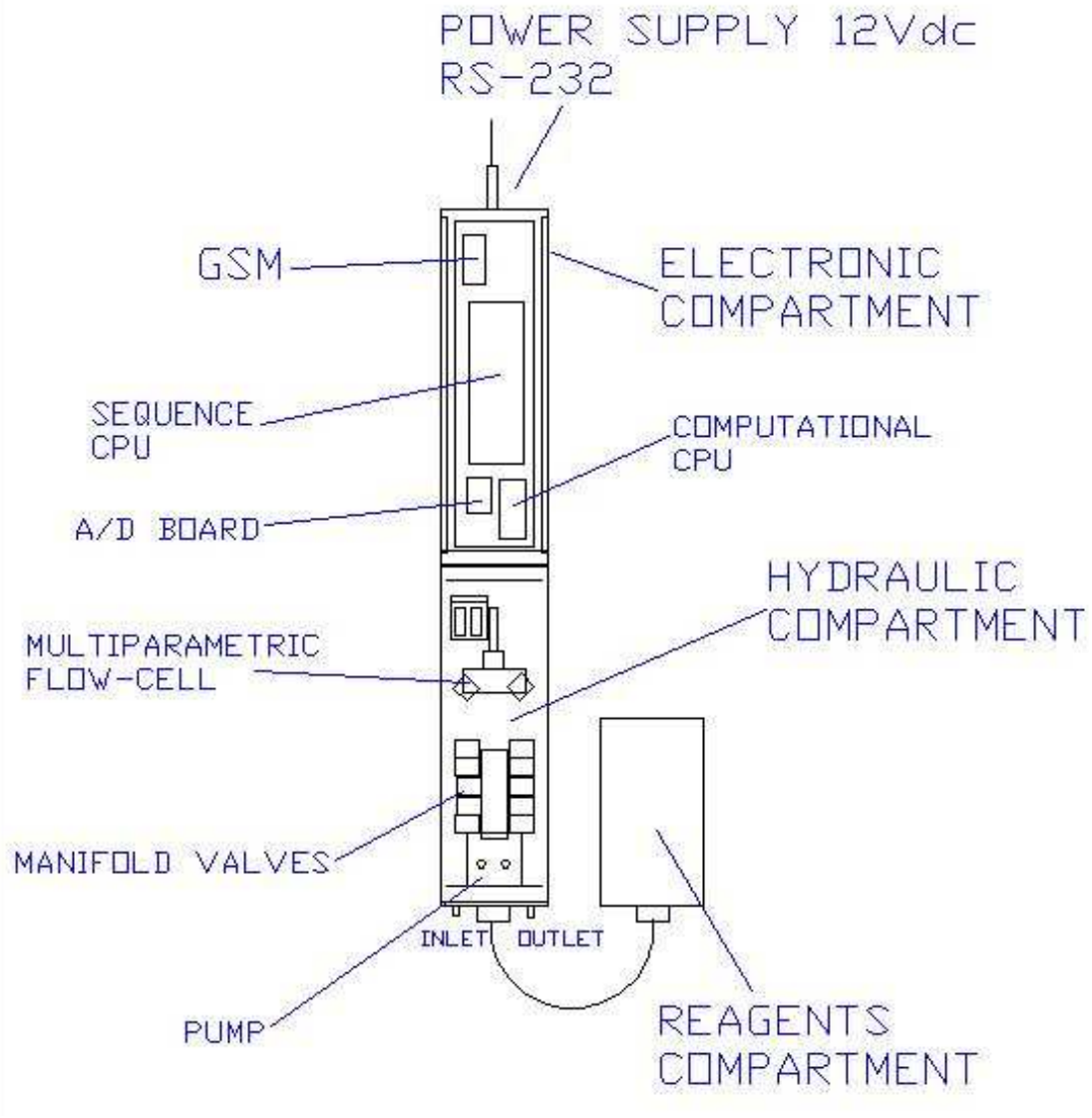
Smart probe



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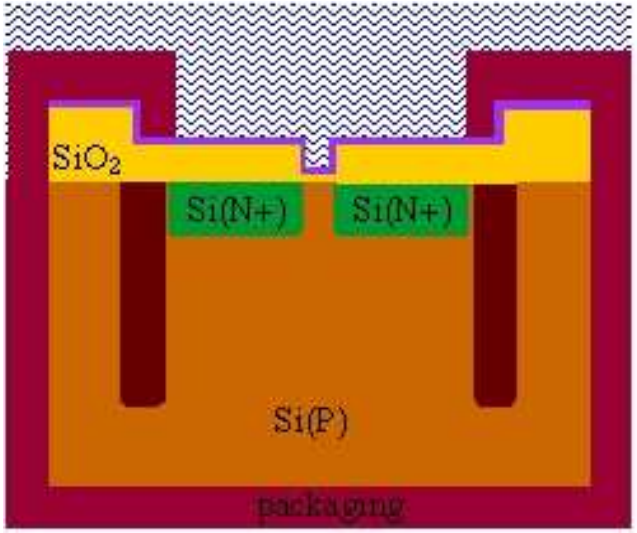

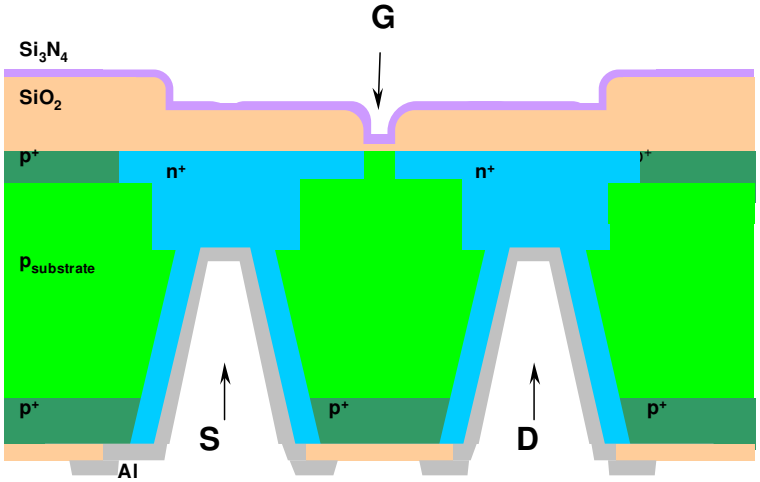

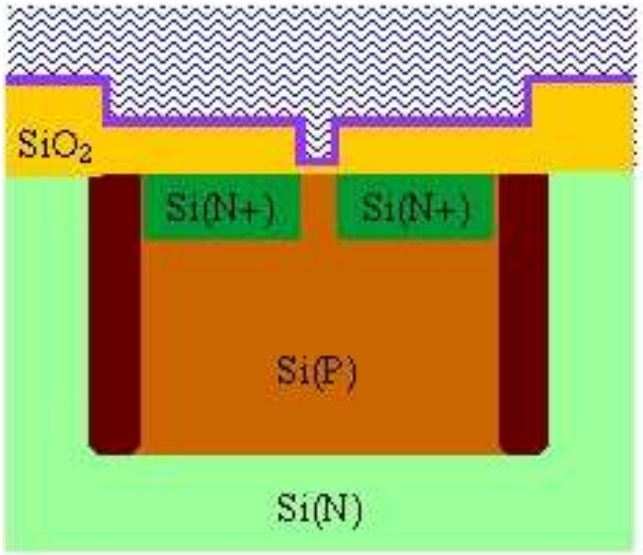

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CHEMFET Sensor

1: reference

2: gate oxide

3: insulating resin

4: channel

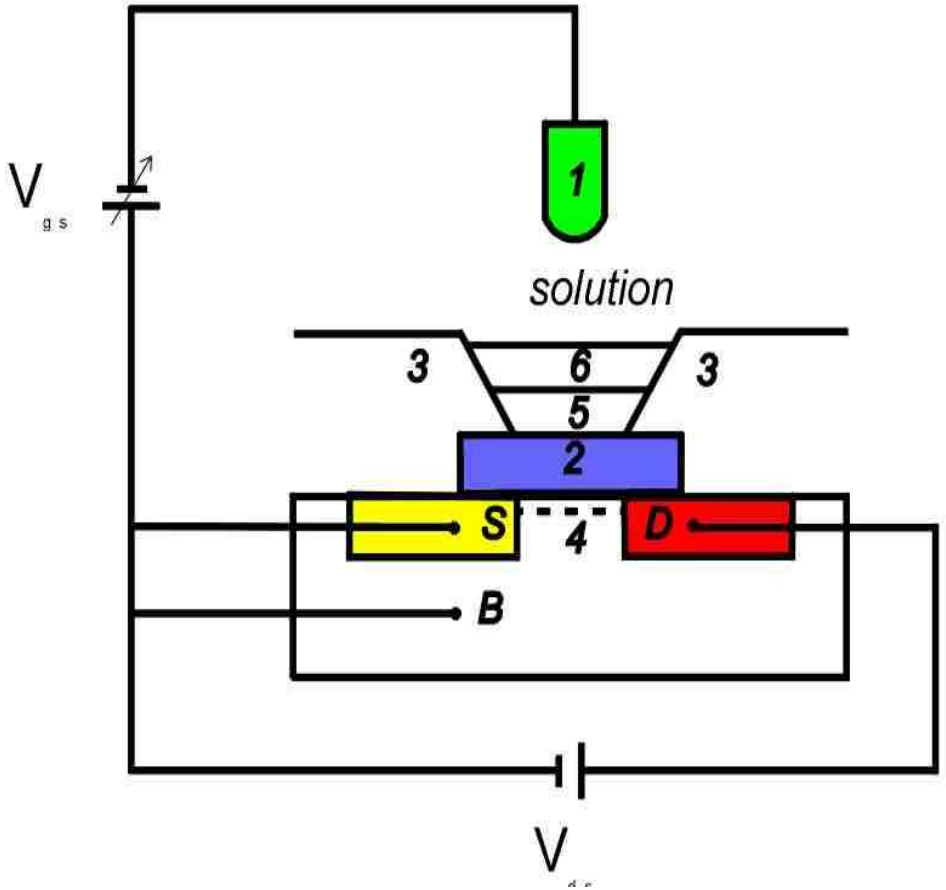
5: polyHEMA

6: membrane

S: source

D: drain

B: bulk



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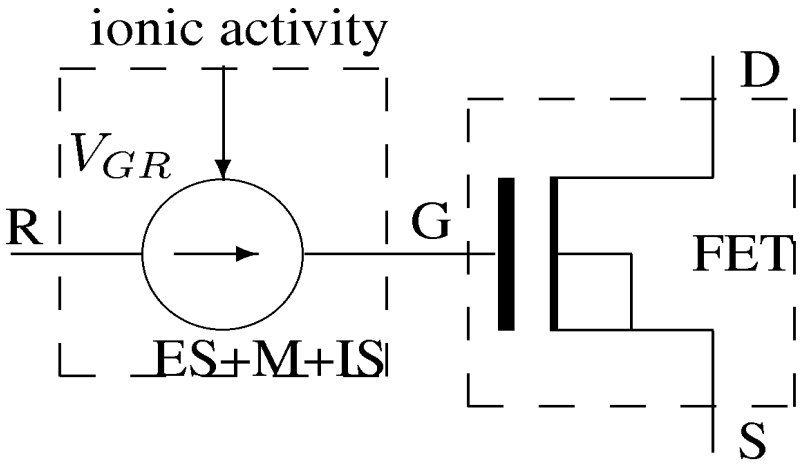
Model of the CHEMFET



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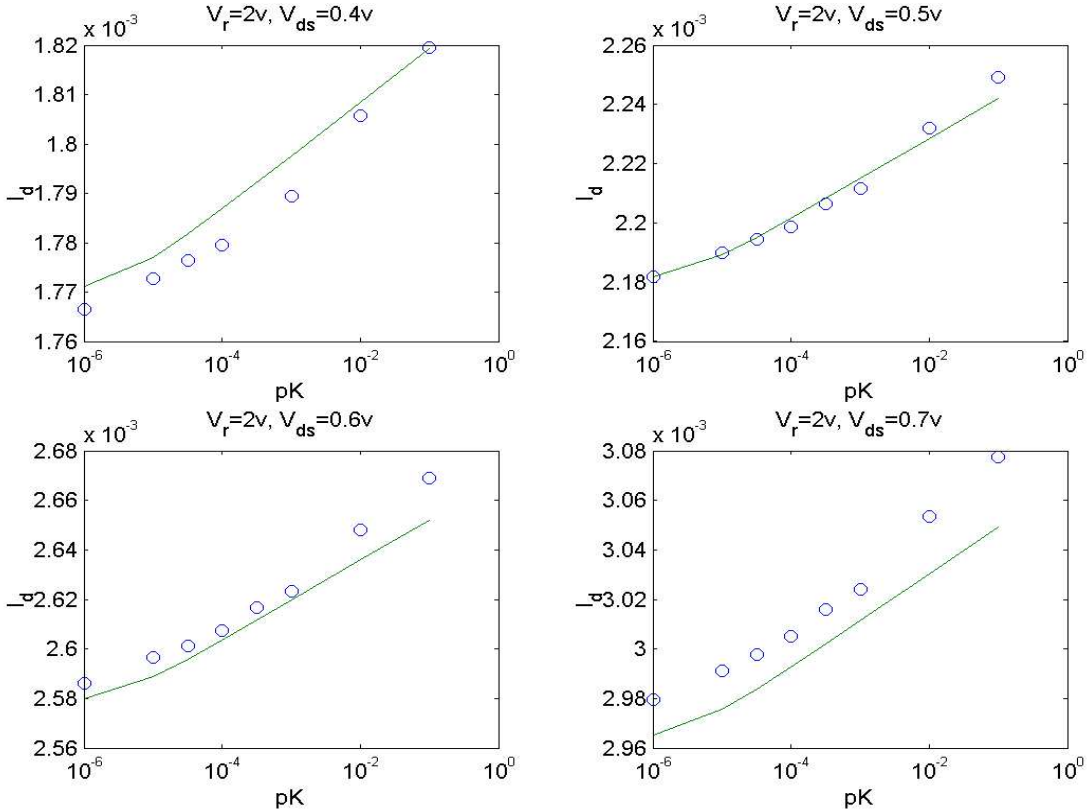

. Fitting the Nikoski model in a potassium ISFET in which a sodium interference aNa was present: the model was fitted for Vr=2 and Vds=0.5v while it was tested for Vr=2V and Vds=0.4, 0.6 and 0.7v. The estimated parameters of the model are β=.0013, Eo=.3160, Vt =-1.4595, K∈[1.66e-005,2.46e-005], Φ=[.0211,.0228]. Note: pK=-log10(aK) and aNa=0.1.

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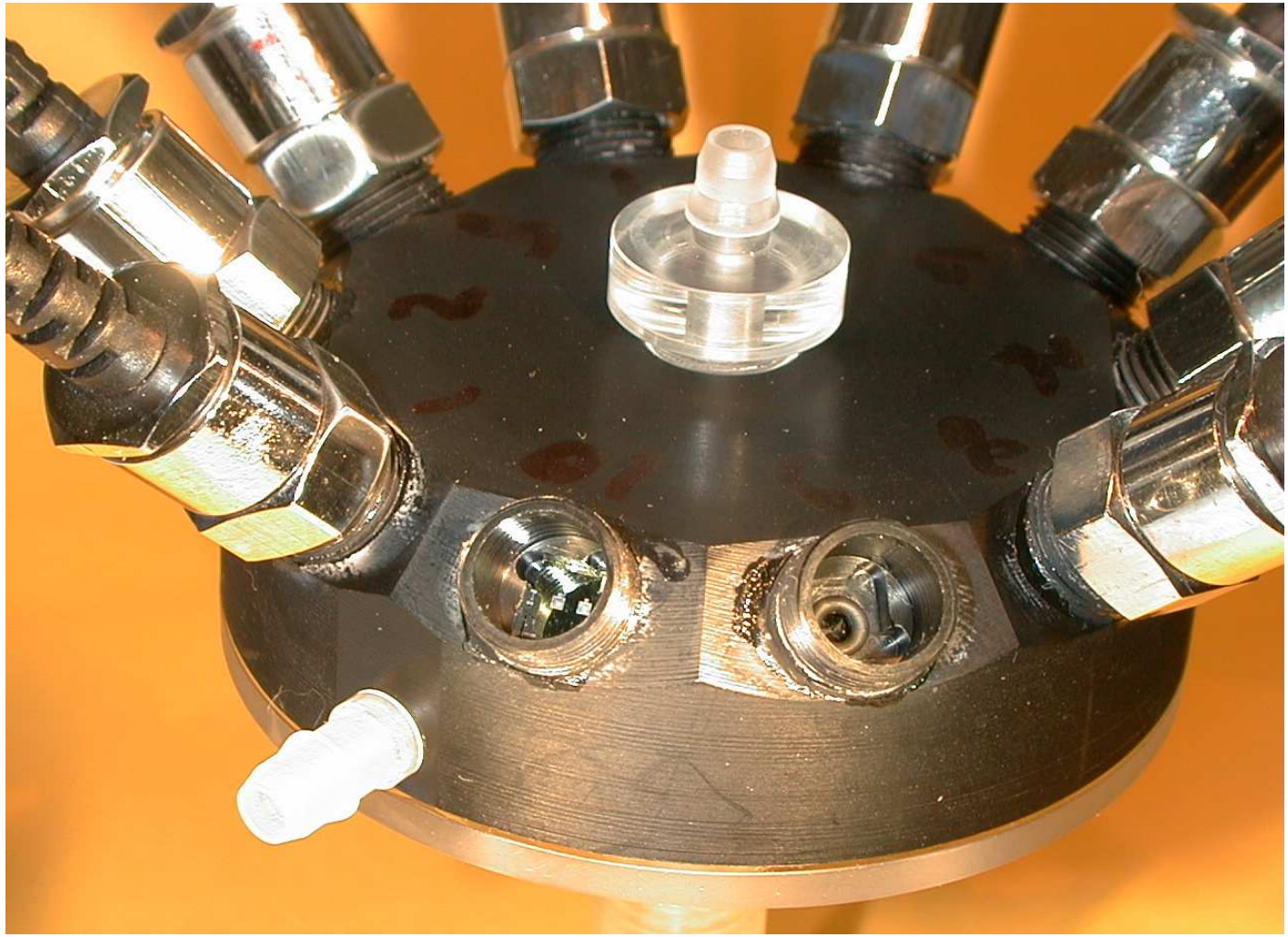
Measuring flow-cell



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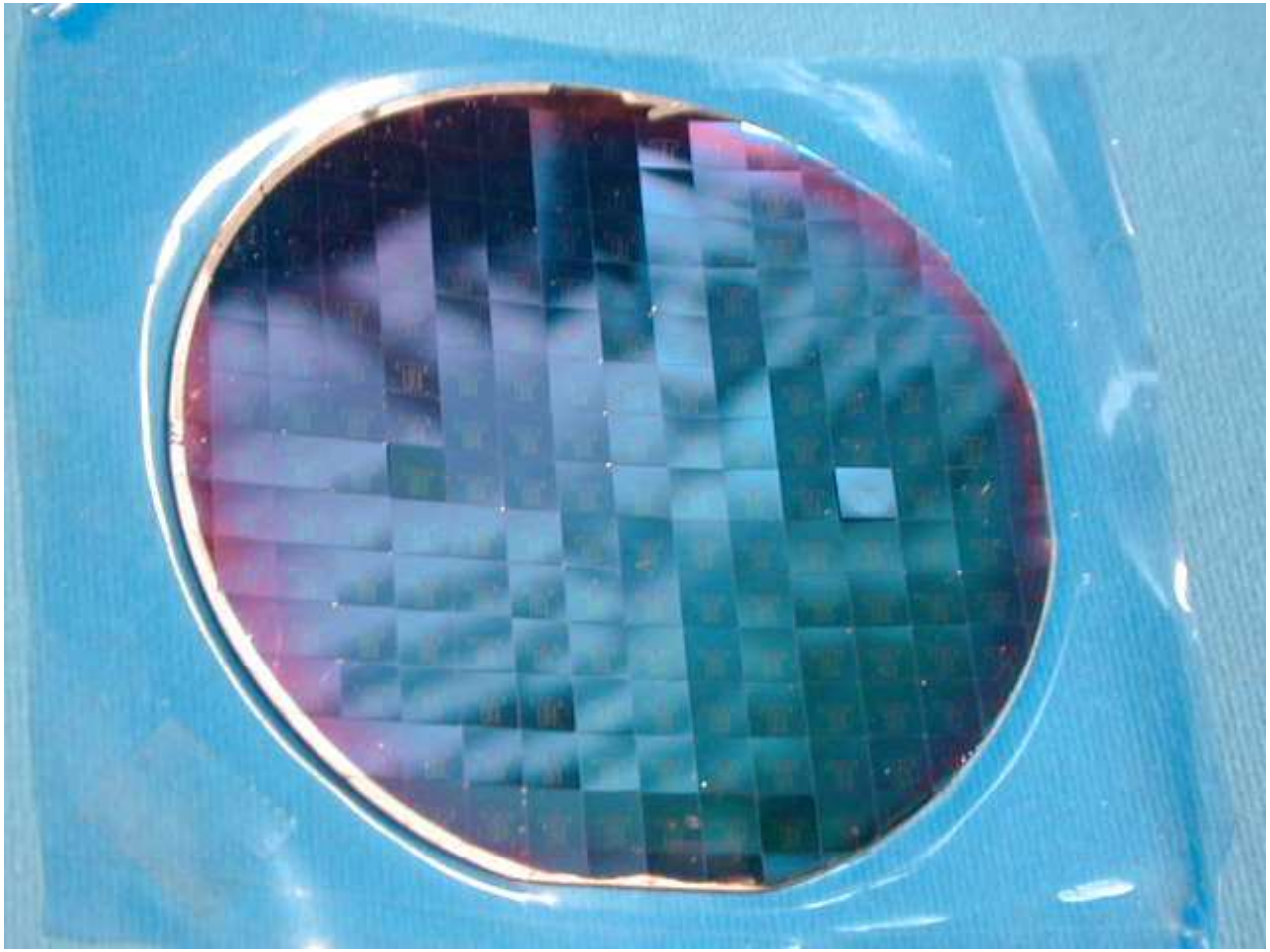
Wafer with sensors



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Measuring stand

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Details of measuring stand

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State of the art:

- **Second year has been just finished. The Annual Review will take place in Brussels on September 29.**
- **The first prototype of the smart probe will be presented**
- **The software for data processing and fusion is developed and its hardware realisation is under processing**
- **The choice of ion-selective membranes is now: NH4, NO2, pH, Ca, Na, K. Other are possible.**
- **On August 31, 2004 the project will be finished with working prototype system**

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- Thank you for your attention