Life Science

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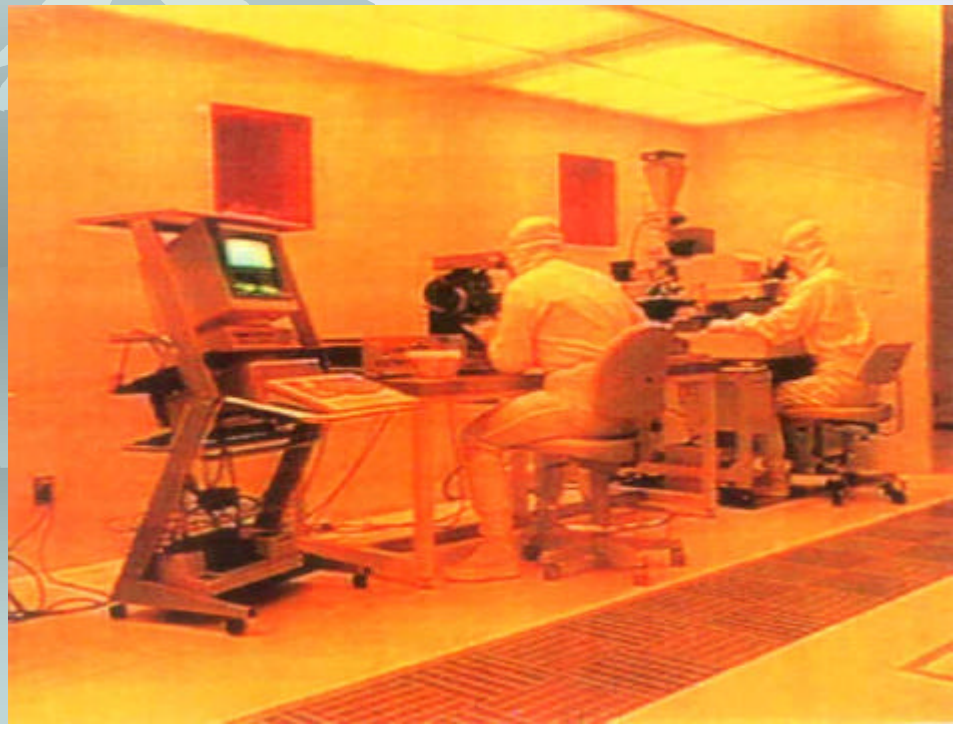
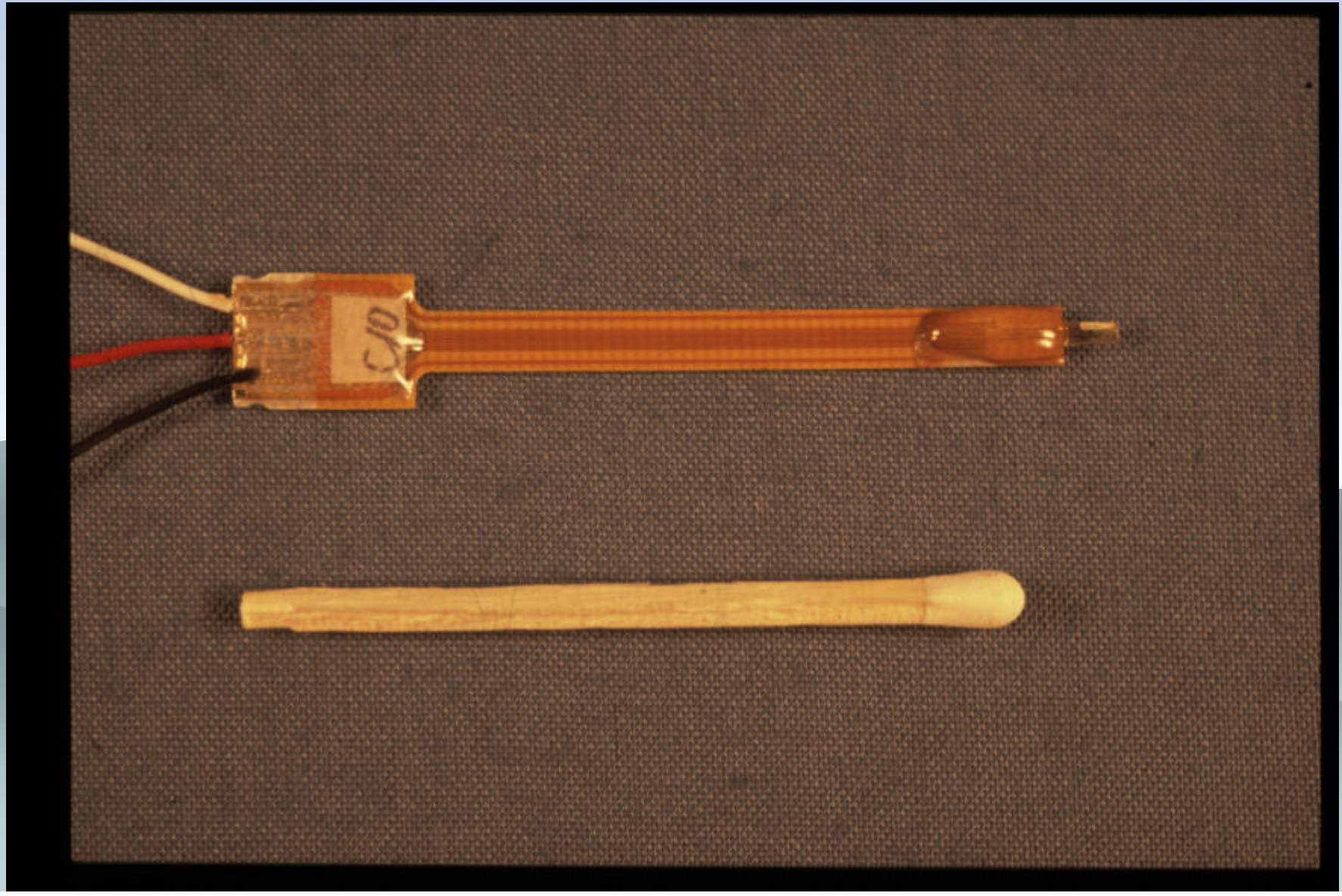
- Application of Microfabrication Technology for Biosensors
- Promotion of Biosensor Business
- Development of Biosensors for Environmental Analysis
- Development of DNA and Protein Chips

Application of Microfablication Technology

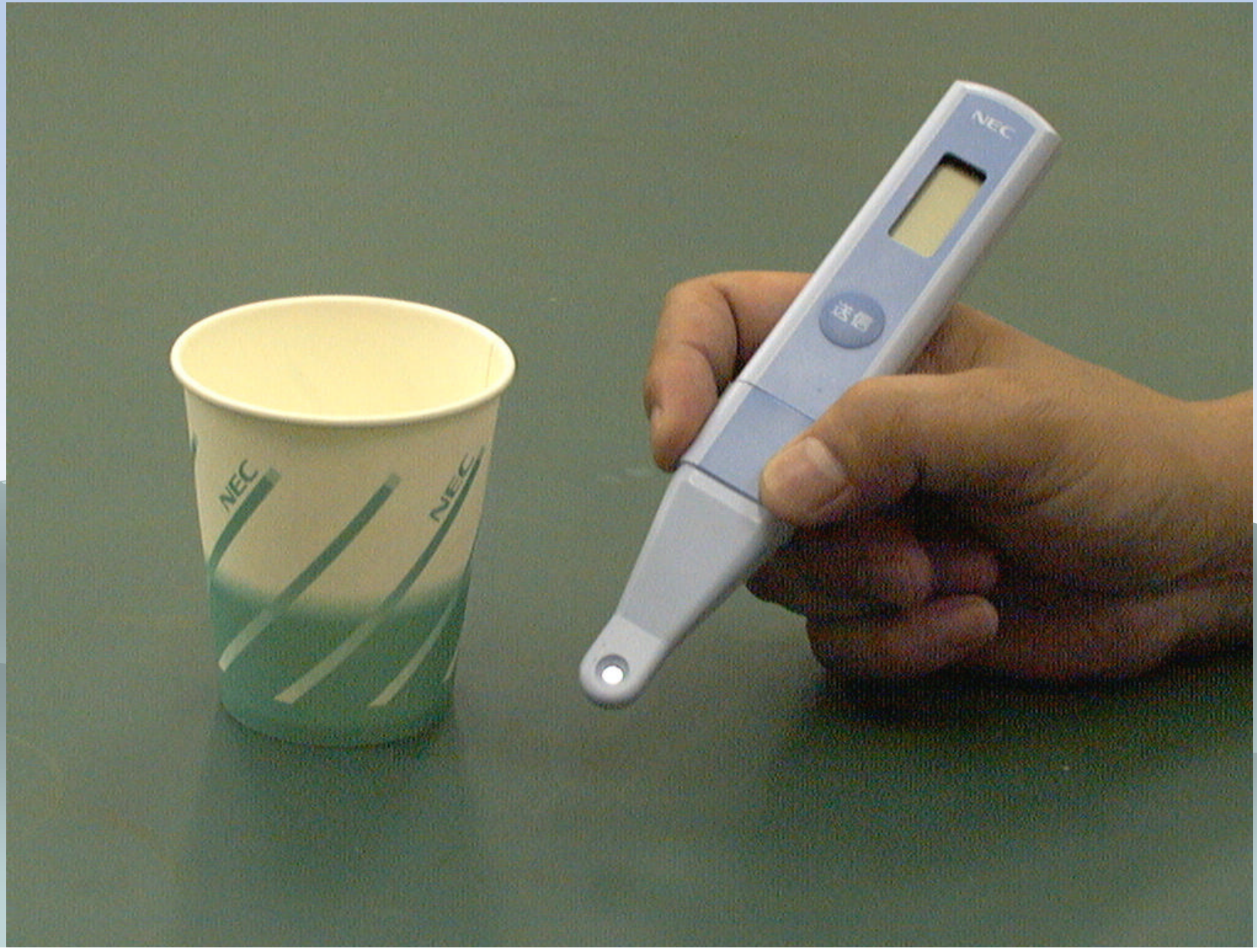
- Microelectrode for Hydrogen Peroxide Measurement
- Microelectrode for Oxygen Measurement
- Fundamental Study for Biochips



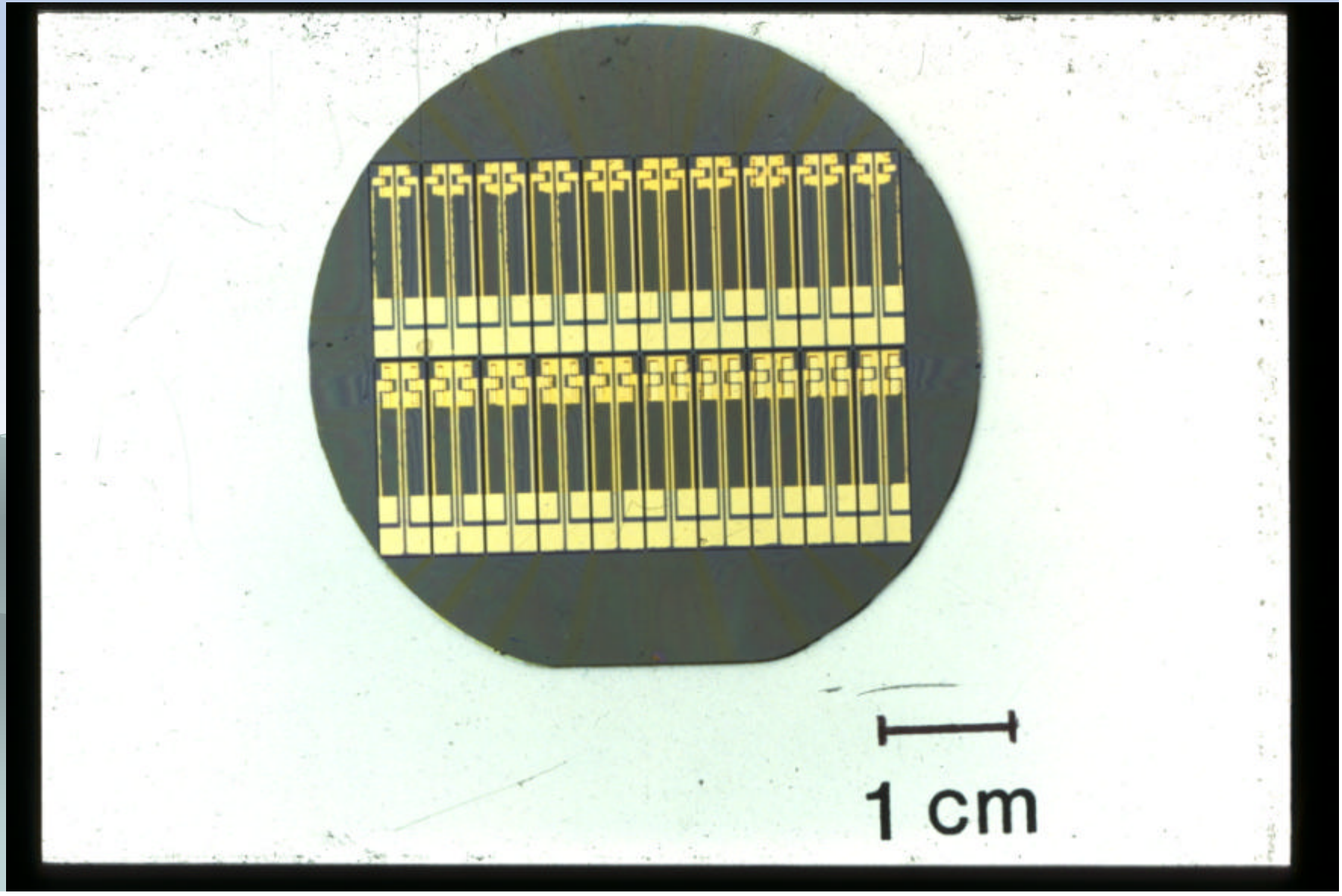
Microelectrode for Hydrogen Peroxide Measurement



Glucose biosenor for Urine



Microelectrode for Oxygen Measurement



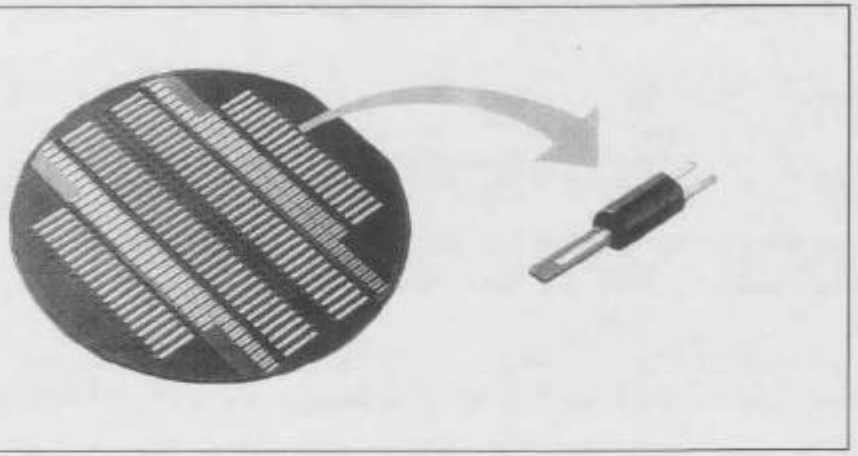
Commercialized Microelectrode for Oxygen Measurement

FDK

KJ21071-1001-005

参考製品

小形酸素センサ



FDKは、半導体微細加工技術を用いて安価で使い捨て可能な新しい小形酸素センサを開発しました。

特長

- 小形なので、微量試料、微小領域で測定可能
- 大量生産ができるので、従来の溶存酸素計より安価
- 隔膜式なので、酸化性または還元性物質の妨害を受けにくい
- 開口部がないので電解液の液漏れを起こしにくい
- 室温（20～30℃）で動作する溶存酸素計

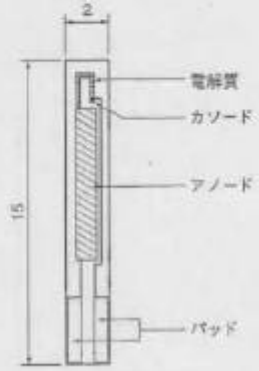
仕様

形　状	2.0×15.0×0.5 (mm)
印加電圧	DC 1.0V
応答時間	30秒 (90%応答) (typical)
出力電流値	110nA (typical)
電流安定性	3% (1時間連続使用時)
寿　命	35～40時間 (連続使用時)
保存期間	6ヵ月 (typical) (パッケージ内に保存の場合)

用途

- 液中（血液、尿、汚水など）の酸素濃度測定
- 各種バイオセンサ
  （グルコースセンサ、BODセンサ等）

構造図



単位＝mm

富士電気化学株式会社

Promotion of Biosensor Business

- Immunochip for infection disease
- Glucose biosensors
- SNP chips
- New BOD sensor

Immunochip for infection disease

特許 特開平10-073596 免疫学的反応性物質を検出又は測定する方法」
特開平10-073597 免疫学的反応性物質を検出又は測定する方法」

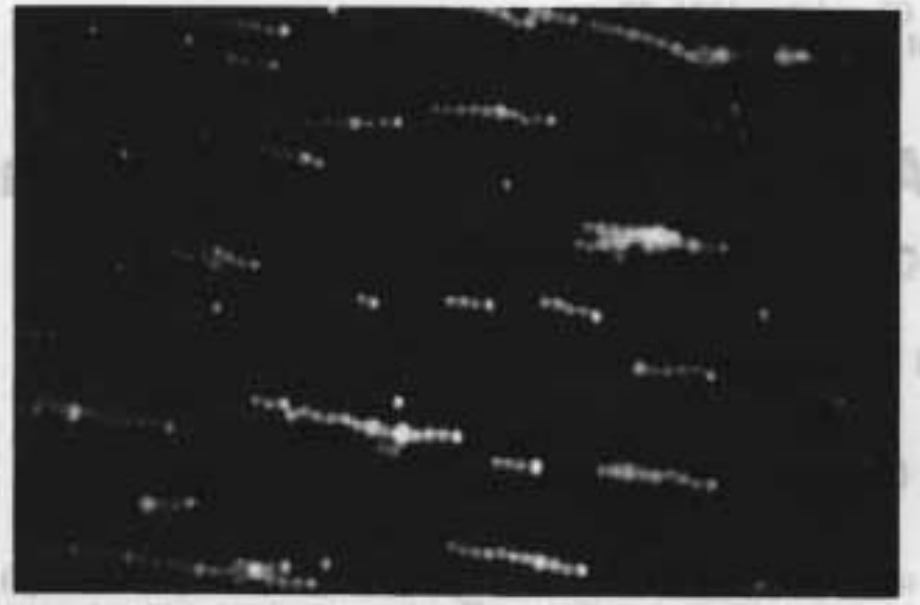
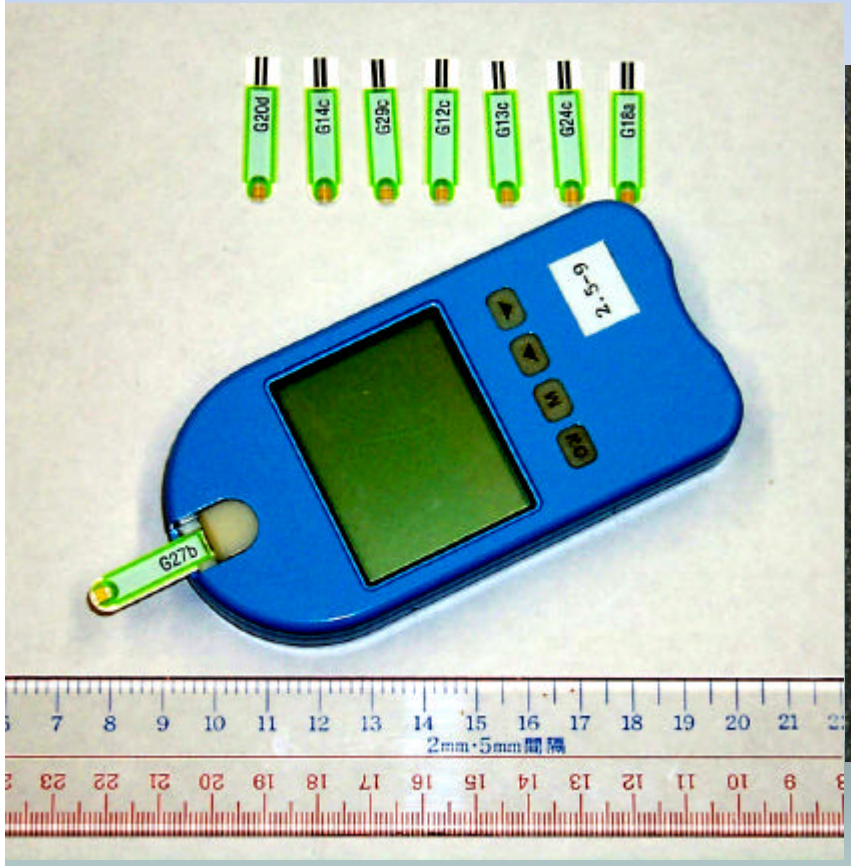


Figure 1. Photograph of pearl chains of latex particles. Fluorescent lattices were agglutinated with an ac field. The area for each latex cluster was measured and the frequency distribution of each bead clusters was used to determine AR.

Glucose Chips

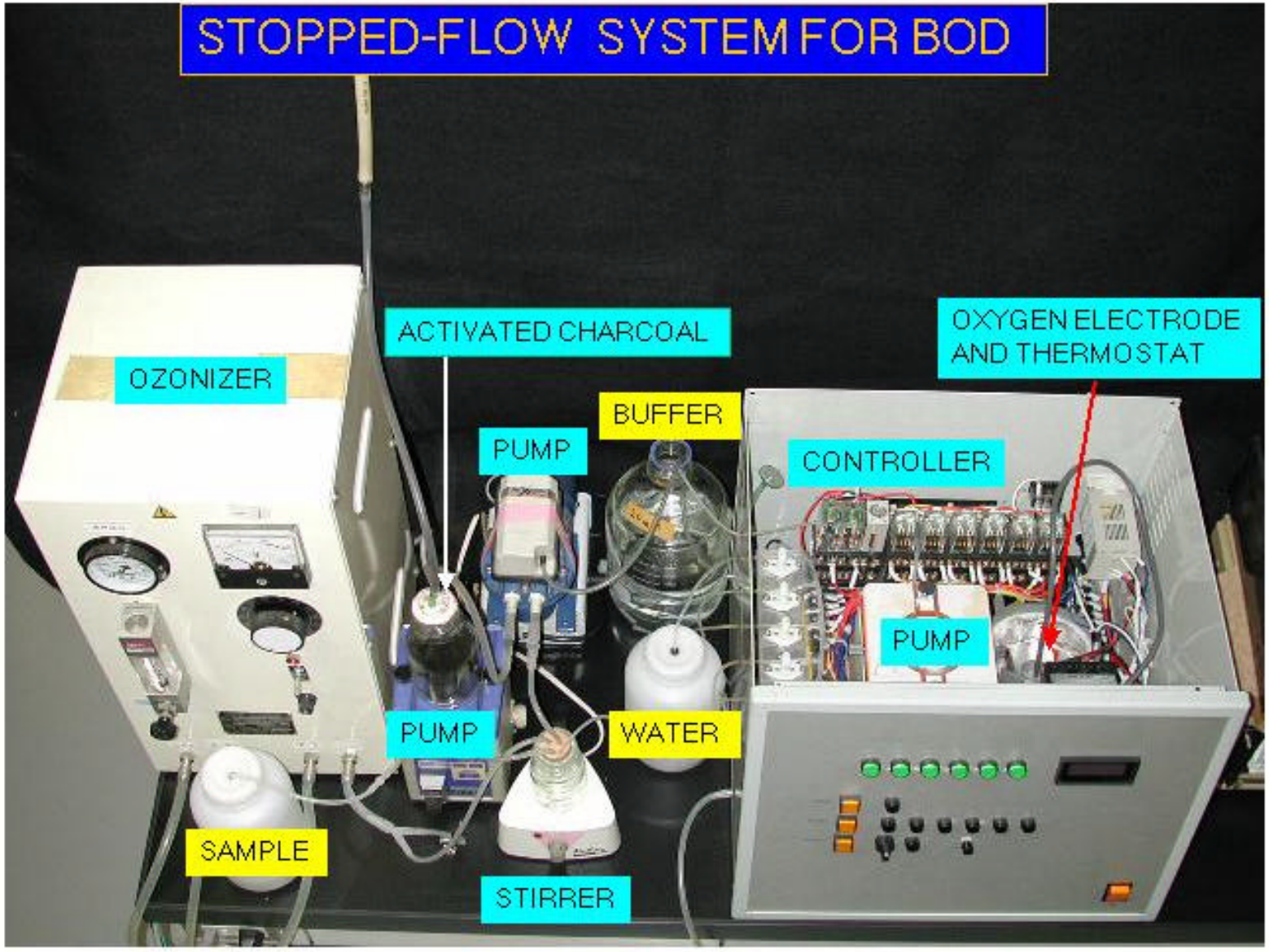


Biosensors for Toilet

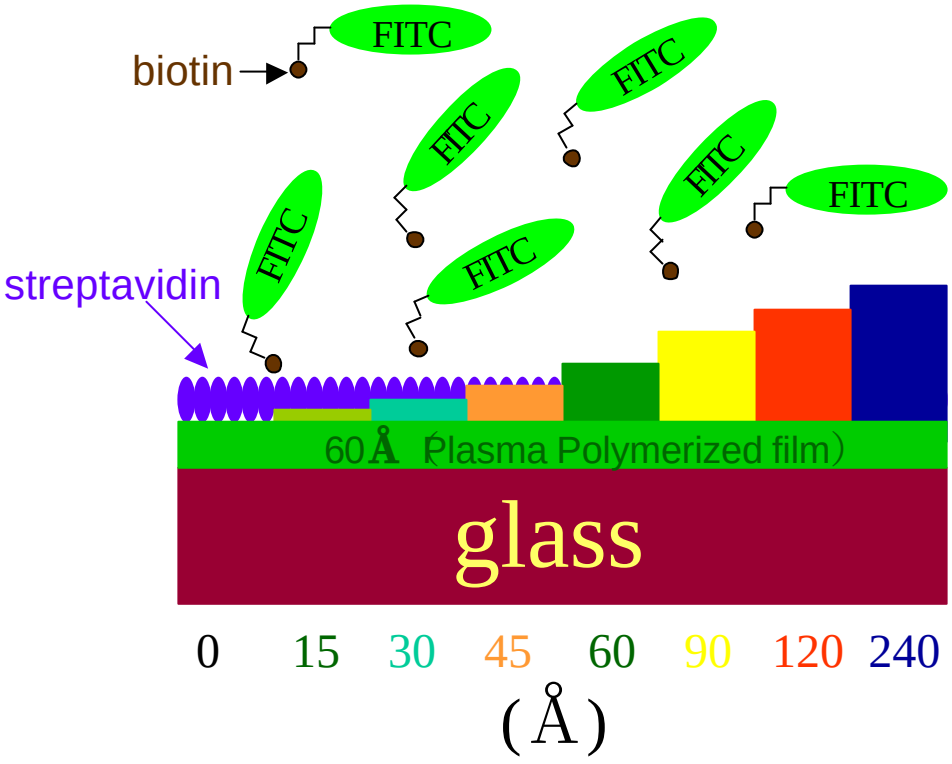
TOTO Co.
“Wellyou ”

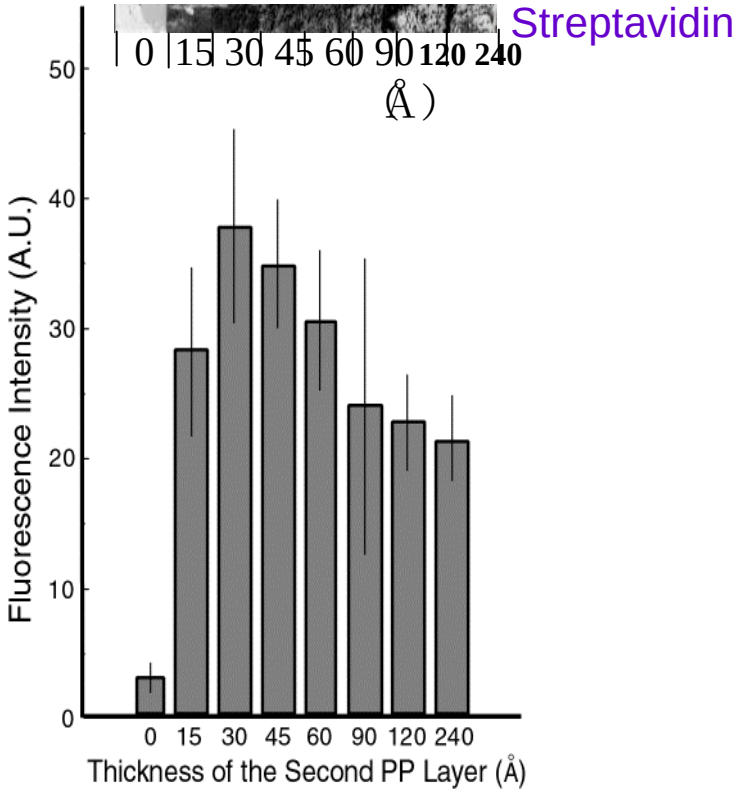
㈱TOTOのHPより引用

High Sensitive BOD sensor

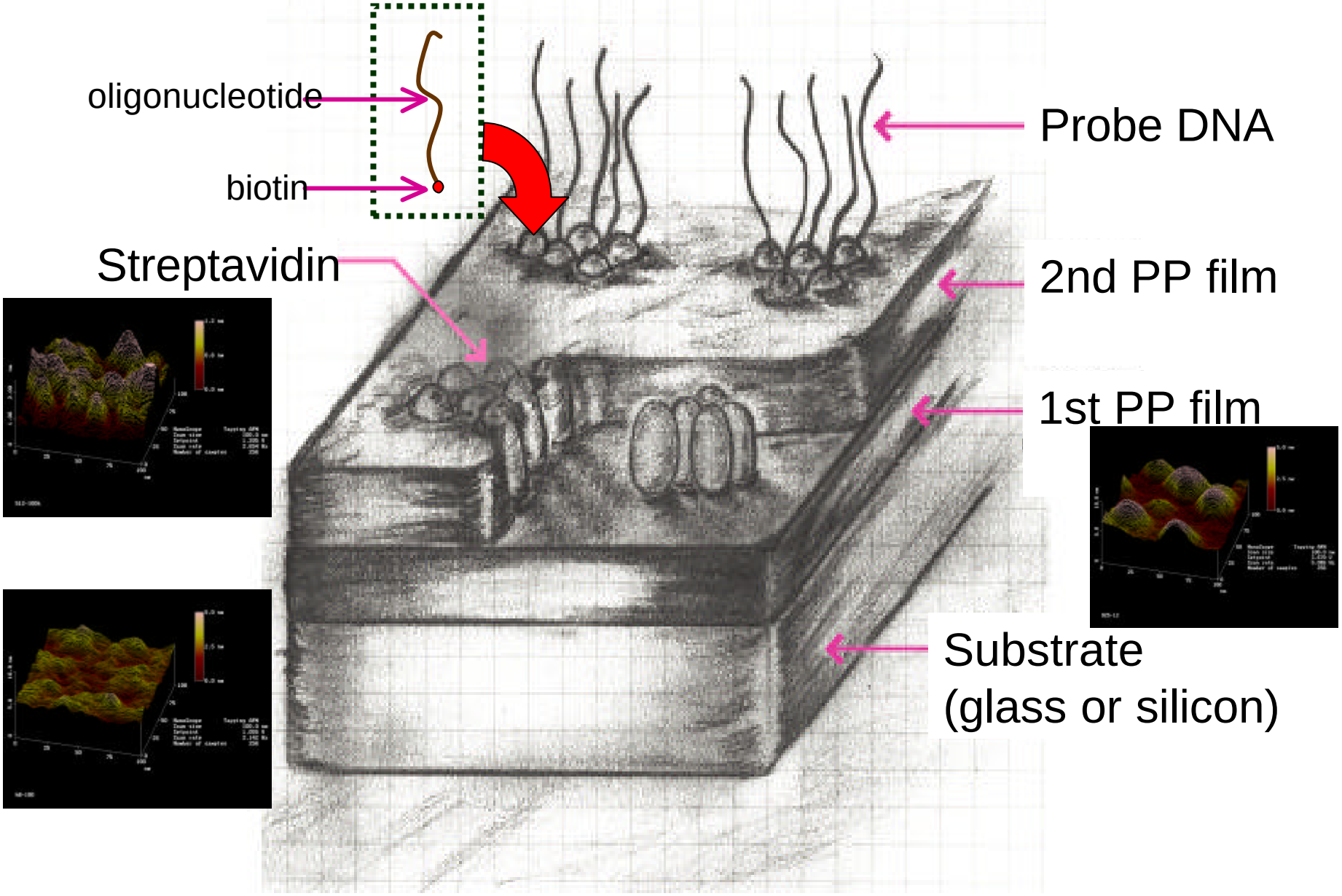


Immobilization of Streptavidin on the Glass Support

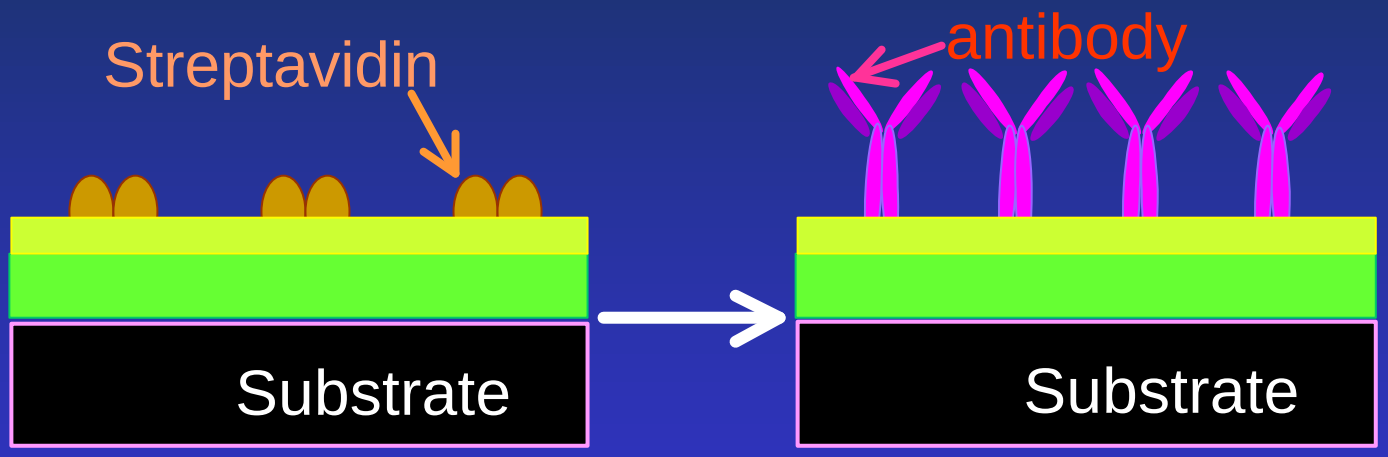




Schematic Diagram of Immobilized Streptavidin



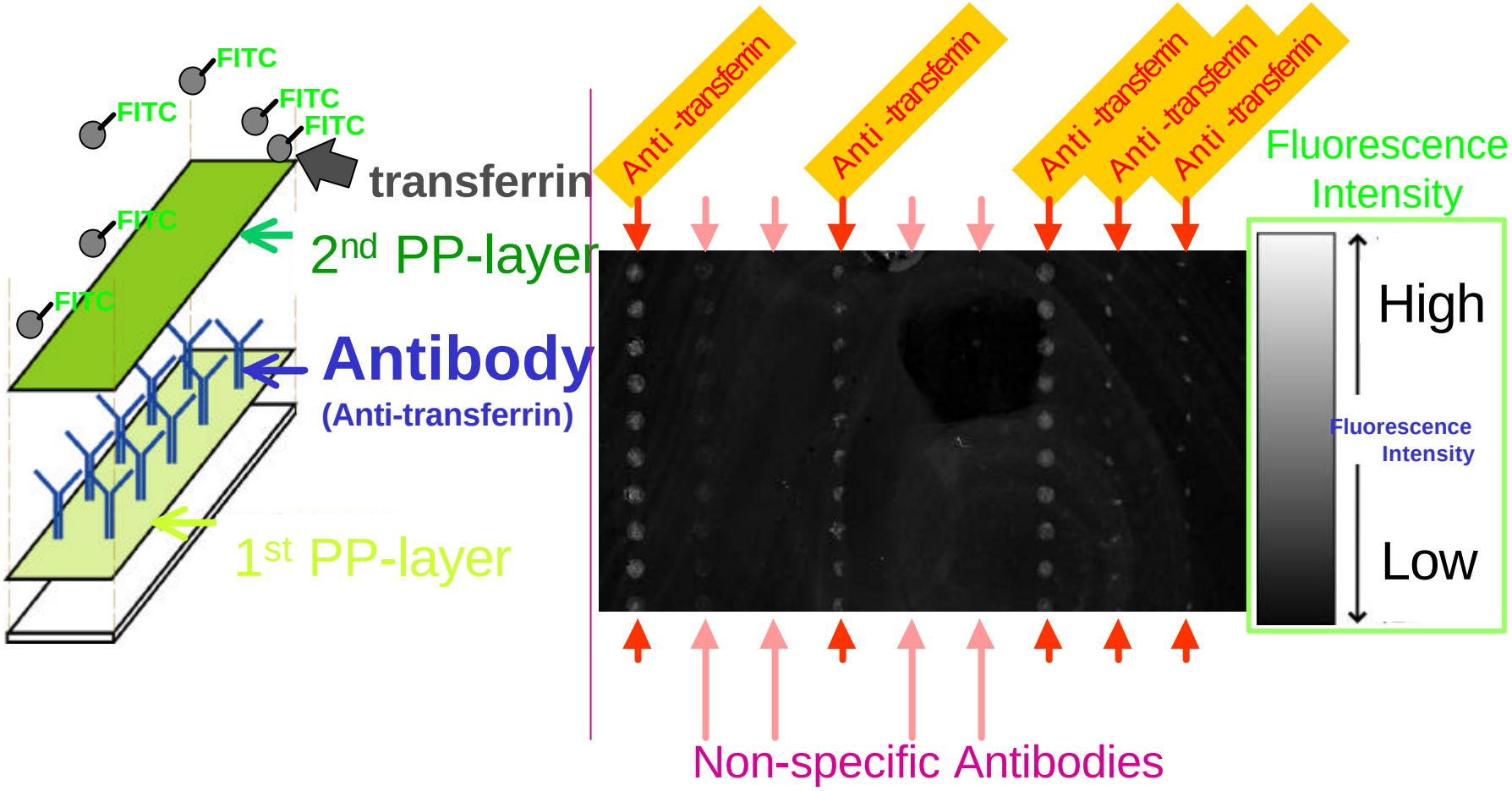
Fabrication of antibody array using plasma polymerized thin-films



1st HMDS plasma polymerized film

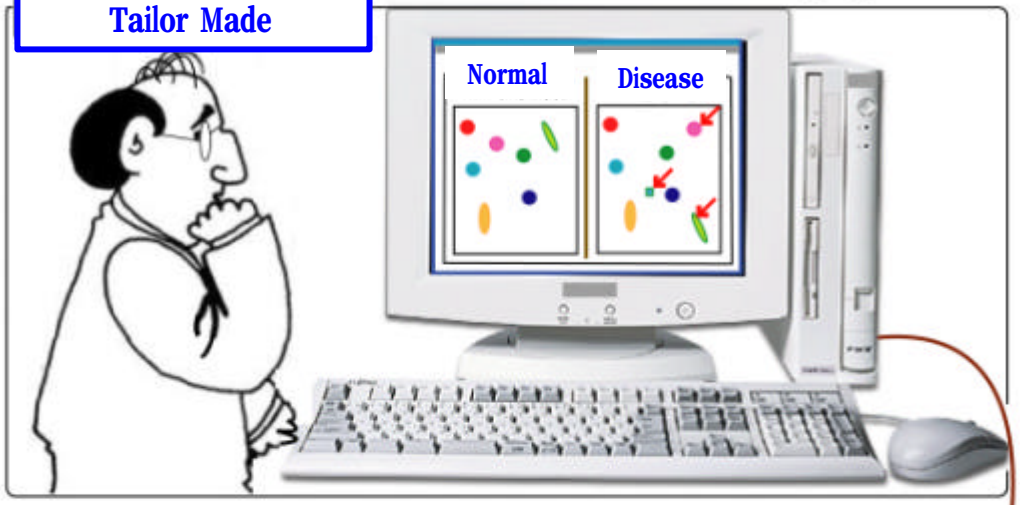
2nd HMDS plasma polymerized film

Antibody-Antigen Interaction in Plasma Polymer



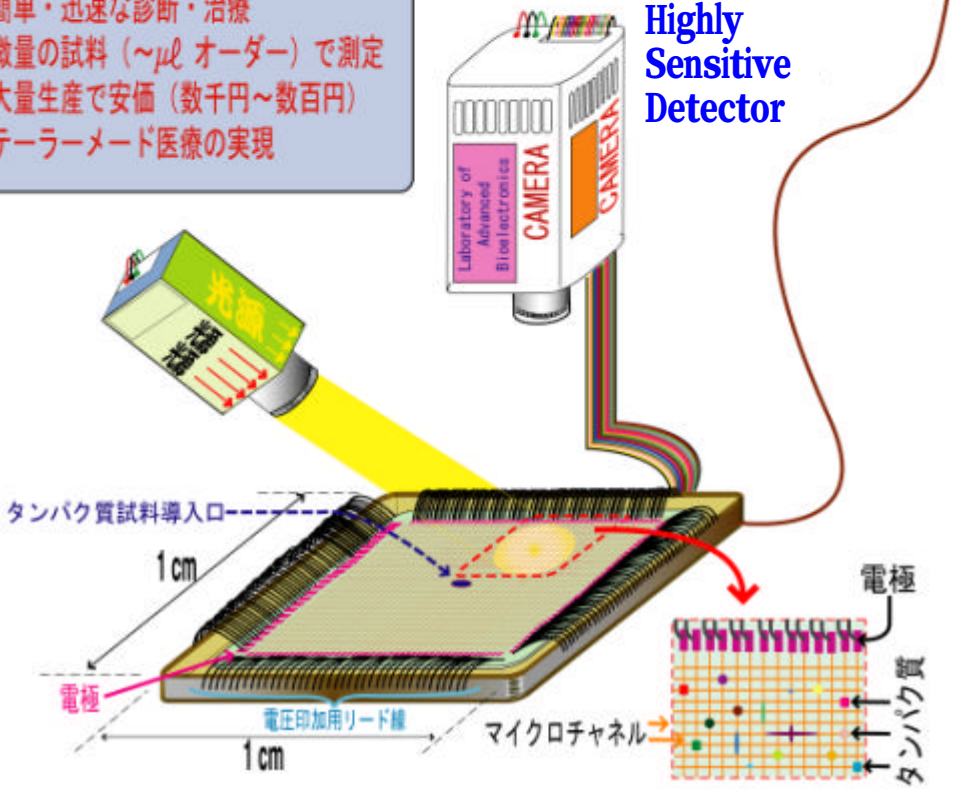
Development of Protein System Chip

Tailor Made



- 簡単・迅速な診断・治療
- 微量の試料（~μℓ オーダー）で測定
- 大量生産で安価（数千円~数百円）
- テーラーメード医療の実現

Highly Sensitive Detector



School of Bionics

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Main Research Fields