

# Molecular sensor films with millions-times enhanced sensitivity

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## Background

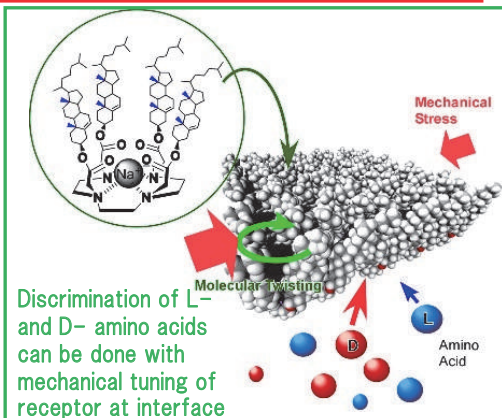
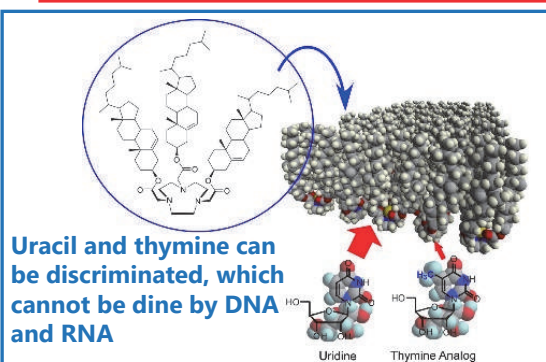
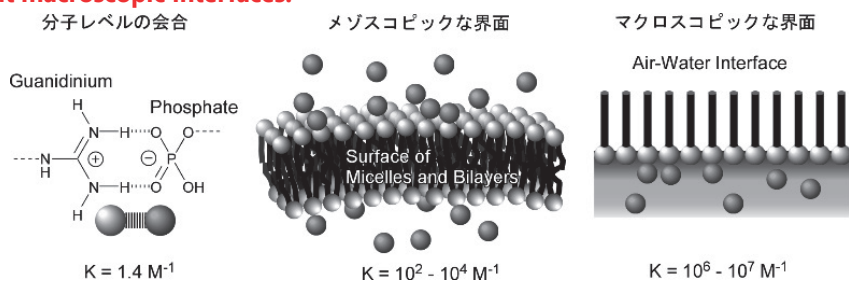
- Molecular recognition and sensing are mainly performed at various interfaces
- Dynamic interfaces are useful media to tune structures of organic molecules.

## Aim

- Exploration of highly emphasized molecular recognition for better sensing performances.
- Establishment of novel molecular recognition mode for innovative sensing

## Advanced Research Topics

**Molecular sensing performances can be emphasized with million times at macroscopic interfaces.**



**Publications** K. Ariga, ChemNanoMat 2, 333-343 (2016)

## Summary

- Molecular recognition performance can be millions-times enhanced at perfectly ordered interfaces
- Sensitive discrimination becomes possible upon molecular tuning at interface.

## Research outcome

- World best sensor
- Combining with organic semiconductor films for sensor device printing
- Tele-communicatable sensing system