Supported lipid bilayers
scientific and practical applications

Rezeptoren
Adhaesions-
Epitope
Enzyme
Antigene
Ionen-
Kanal

Solid Support

- Lysosomes
- Peroxisomes
- Mitochondria
- Chloroplasts
- the Endoplasmic Reticulum (ER)
- the Golgi complex
- the Nucleus
- the Cytosol
Langmuir–Blodgett transfer

Langmuir-Schäfer transfer

Solvent exchange

Vesicle spreading
Interference from thin films

X-rays: light with nm wavelength
X-ray and neutron reflectometry

- Electron density profiles of thin layers (perpendicular to the surface)
- Surface roughness

\[ q_z = \frac{4\pi}{\lambda} \cdot \sin(\alpha) \]
Schematic structure of a synchrotron

Undulators and wigglers: multipole magnets
Supported bilayer on SiO2

Supported bilayer on a thin film of PAH

also: Kuhl et al. PRL (2005)
C. Reich, Rev. Sci. Inst. 76, 095103 (2005)

C. Reich, Physica B (2007)
Bilayer plus protein layer


 tethered bilayer

C. Daniel et al, Biointerphases (2007)