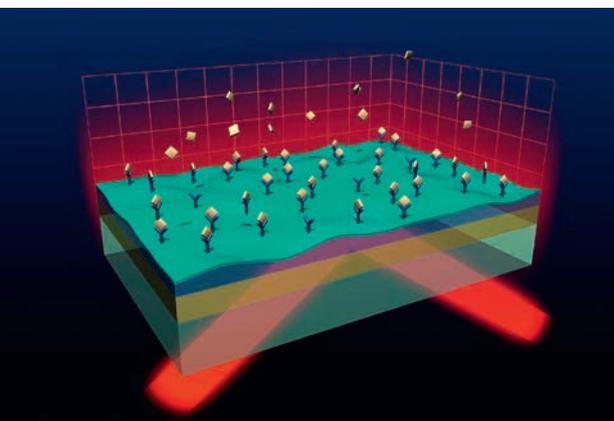
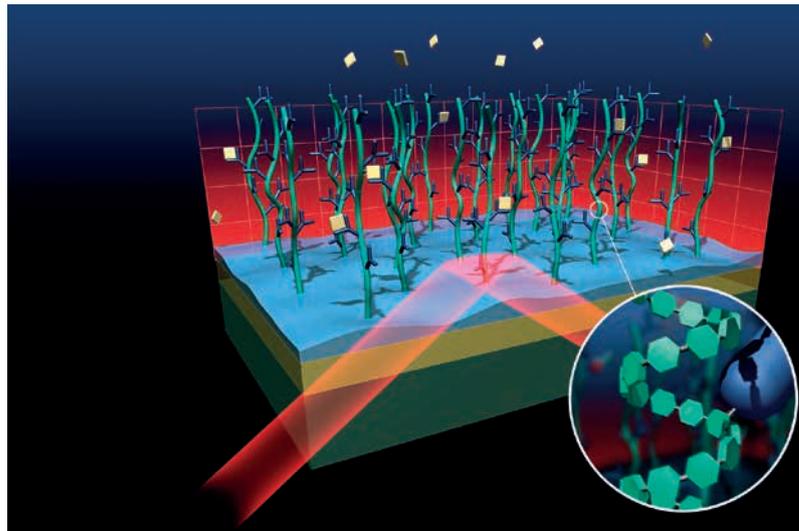


XANTEC: NANO DIFFERENCES



Ultra Sensitivity

Now, achieve ultrasensitive detection of compounds with MWs below 100 Da or at low concentrations. Our coatings have remarkably low background signal, with a S/N ratio up to one order of magnitude better as compared to other state of the art sensorchips. Low MW compounds can produce signals as high as a few hundred RU on our surfaces, whereas the norm using other sensors is only a few ten RU.

Amazing Specificity

Our chips offer the lowest degree of non-specific interactions and eliminate blocking steps, use of Tween or other additives. Several of our coatings are virtually 100% bioinert, even in pure serum, and are thus well-suited for biomedical/diagnostic applications or bioprocess monitoring, among many other applications.

Protocol Transfer

Our protocols can be directly transferred to any application, including to identically coated microarray slides, offering a large advantage in research methodology and the ability to directly compare results obtained from different instruments, as well as via multiple detection techniques.

BIG ALTERNATIVE

High Immobilization Capacity

As an option, chip surfaces coated with extraordinary dense hydrogels are available. These feature thicknesses of more than 500 nm and immobilization capacities of well above 100.000 μ RIU (~ 100.000 RU or 10.000 mdeg). Not only do these coatings help yield higher signals, but they also provide great enough sensitivity and capacity to detect low molecular weight analytes as well.

Physicochemical Stability

The hydrogel matrices tolerate non-oxidative aqueous solutions from pH 1 – 13, as well as all common organic solvents. Temperatures up to 90 °C are unproblematic. Materials may be purchased in advance for a series of experiments and stored for years without fear of degradation. Results will remain consistent over time.

Tremendous Savings

The chips cost 30 – 60% less than leading competitors' prices! Our technology can help not only improve your results, but also save money as well.

Ultimate Convenience

Optimizing ligand immobilization protocols and repeating immobilization runs are both expensive and labour intensive. XanTec can provide SPR sensorchips with your individual ligand pre-immobilized to optimized surfaces and sent ready-for-use. The direct result is low chip-to-chip variation within one batch with the added benefits of saved time and reagents.

Wide Variety of Immobilization Chemistries

You decide upon the best solution for your experimental methods. XanTec offers a wide selection of immobilization chemistries in addition to the usually employed NHS-mediated amide coupled to carboxylated surfaces. You have a choice of functional groups which allow for several alternative covalent and non-covalent methods of ligand immobilization.

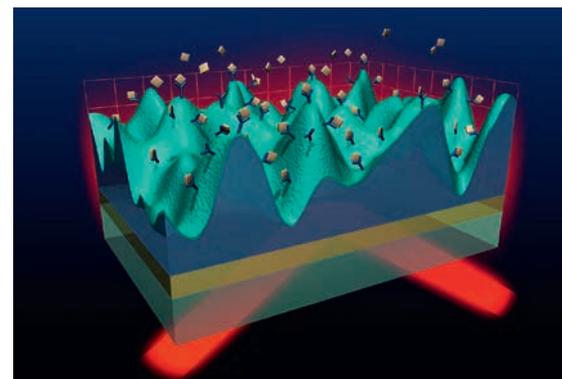
High Versatility

We additionally offer non-polysaccharide matrices with excellent bioinertness. In contrast to the microbially produced dextran, in which molecules are slightly branched and have a helical superstructure, the polymer chains of these hydrogels are strictly linear and thus better defined. Consequently, a better sensorgram results due to improved diffusion characteristics in kinetic measurements and binding experiments.

XanTec sensorchips are compatible with:

- ReichertSR7000,SR7000DC
- Biacore® 1000 – 3000, X, X100, C
- Autolab SPR, ESPRIT, SPRINGLE
- IBIS Systems
- OptrelMultiskop
- Moritexsystems

Alternative formats and custom coatings available upon request.



Selected References:

- Syrovets, T., Büchele, B., Gedig, E., Slupsky, J. R., Simmet, T. 2000. Acetyl- Boswellic Acids are novel catalytic inhibitors of Human Topoisomerases I and II. *Mol. Pharmacol.*, 58: 71–81.
- Baud, C., Karamanou, S., Sianidis, G., Vrontou E., Politou A. S., Economou, A. 2002. Allosteric Communication between Signal Peptides and the SecA Protein DEAD Motor ATPase Domain. *J. Biol. Chem.*, 277/16: 13724–13731
- Syrovets, T., Schüle, A., Jendrach, M., Büchele, B., Simmet, T. 2002. Ciglitazone inhibits plasmin-induced proinflammatory monocyte activation via modulation of p38 MAP kinase activity. *Thromb. Haemost.*, 88: 274–281.
- Baritaki, S., Zafirooulos, Z., Sioumpara, M., Politis, M., Spandidos, D.A., Krambovitis, E., 2002, Ionic interaction of the HIV-1 V3 domain with CCR5 and deregulation of T lymphocyte function. *Biochem. Biophys. Res. Comm.*, 298: 574–580
- Syrovets, T., Gschwend, J.E., Büchele, B., Laumonnier, Y., Zugmaier, W., Genze, F., Simmet, T. 2005. Inhibition of I_B Kinase Activity by Acetyl-boswellic Acids Promotes Apoptosis in Androgen-independent PC-3 Prostate Cancer Cells in Vitro and in Vivo. *J. Biol. Chem.*, 280/7: 6170–6180
- Renberg, B., Shiroyama, I., Engfeldt, T., Nygren, P.-A., Eriksson Karlström, A. 2005
Affibody protein capture microarrays: Synthesis and evaluation of random and directed immobilization of affibody molecules. *Anal. Biochem.*, 341, 334–343
- Grote, J., Dankbar, N., Gedig, E., König, S. 2005 A surface plasmon resonance / mass spectrometry interface. *Anal. Chem.*, 77/4: 1157–1162
- Syrovets, T., Schüle, A., Jendrach, M., Büchele, B., Krauss, C., Laumonnier, Y., Simmet T. 2005. Acetyl-Boswellic Acids Inhibit Lipopolysaccharide-Mediated TNF- α Induction in Monocytes by Direct Interaction with I_B Kinases. *J. Immunol.*, 174: 498–506.
- Juncker, D., Schmid, H., Delamarche, E. 2005 Multipurpose microfluidic probe. *Nature Mat.*, 4, 622 - 628

Knowing that SPR and related sensorchips are the heart of affinity biosensors has been the driving impetus at XanTec bioanalytics. Our entire philosophy is built upon the realization that a chip's nanoarchitecture and surface chemistry are key to achieving optimal sensitivity and selectivity.

Our proprietary technology solves a number of critical issues usually associated with state of the art surface chemistry. The coatings are robust and prevent exposure of hydrophobic nanodomains or pinhole defects which can cause non-specific interactions. As the chemistry is more versatile, an even larger choice of topcoats is available to specifically address a laboratory's individualized needs.

XanTec bioanalytics provides high quality sensor chips, which also yield the most precise results and sensitive data possible.

For more information contact us:

XanTec bioanalytics GmbH

Merowingerplatz 1a
D-40225 Düsseldorf
Germany

Phone +49 211 993 647 44
Fax +49 211 993 647 46
E-mail info@xantec.com

www.xantec.com