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- 1 Analytical system comprising SPR optical readout, sampler and syringe pump.
- 2 Photograph of the gold coated polymer chip with flow cell (separated).
- 3 Optical chip coated with BSW sensor stack for combined label-free and fluorescence sensing.

## DISPOSABLE SENSORS FOR MULTI-SPOT LABEL-FREE ANALYSES

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#### Ambition

Label-free, parallel optical biosensing based on low cost polymer substrates for various applications.

#### Technology / Approach

- Patented approach utilizing the well-known sensitive SPR method
- Temporally resolved analysis for determination of kinetic parameters
- Angularly resolved analysis comprising high linearity and measurement range
- Up to 60 Spots detected simultaneously within one micro channel
- Introduction of redundancy as well as positive and negative controls possible
- Simple 'click-in' handling
- Polymer chip and cover components ensure low costs for large batch volumes

#### Applications

- Aptamer based Thrombin sensing: A. Henseleit, et al., Eng. Life Sci. 11, 573
- CMV detection in human serum: F. Sonntag et al., Proc. SPIE 7365, 73650Q
- DNA hybridization arrays: A. Kick et al., Biosens. Bioelectron. 26, 1543 and N. Danz et al., Eng. Life Sci. 11, 566
- Virus detection in plants: K. Florschütz et al., J. Virolog. Meth. 189, 80
- Albumin monitoring in cell cultures: A. Henseleit et al., J. Sens. Sens. Syst. 4, 77

#### Outlook

- Dielectric thin film stacks for enhanced label-free performance and combined label-free and fluorescence analysis.
- A. Sinibaldi et al., Sens. Act. B 174, 292
  - N. Danz et al., Proc. SPIE 9506, 95060V