

## **List of Publications**

### **2023**

144. Beck, F., Loessl, M., Baeumner, A.J. Signaling strategies of silver nanoparticles in optical and electrochemical biosensors: considering their potential for the point-of-care *Microchimica Acta* (2023), <https://doi.org/10.1007/s00604-023-05666-6>
143. Beck, F., Loessl, M., Baeumner, A.J. “Signaling strategies of silver nanoparticles in optical and electrochemical biosensors: considering their potential for the point-of-care.” *Microchimica Acta* (2023) 190: 91, <https://doi.org/10.1007/s00604-023-05666-6>
142. Rink, S., Duerkop, A., Baeumner, A.J. “Enhanced chemiluminescence of a superior luminol derivative provides sensitive smartphone-based POCT with enzymatic  $\mu$ PADs.” *Analysis and Sensing* (2023), <https://doi.org/10.1002/anse.202200111>
141. Streif, S., Neckermann, P., Spitzenberg, C., Weiß, K., Hoecherl, K., Kulikowski, K., Hahner, S., Noelting, C., Einhauser, S., Peterhoof, D., Asam, C., Wagner, R., Baeumner, A.J. “Liposome-based high-throughput and point-of-care assays toward the quick, simple, and sensitive detection of neutralizing antibodies against SARS-CoV-2 in patient sera.” *Analytical and Bioanalytical Chemistry* (2023) 415, 1421 – 1435, Issue Cover, Paper in Forefront, <https://doi.org/10.1007/s00216-023-04548-3>
140. Rink, S., Baeumner, A.J. “A perspective on the progression of paper-based POCT towards being an indispensable diagnostic tool in future health-care.” *Anal. Chem.* (2023) 95, 3, 1785 – 1793, <https://doi.org/10.1021/acs.analchem.2c04442>

### **2022**

139. Geilfuss, D., Boukherroub, R., Dostalek, J., Knoll, W., Masson, J.F., Baeumner, A.J., Szunerits, S. “Can classical surface plasmon resonance advance via the coupling to other analytical approaches?” *Front. Anal. Sci.*, (2022) Sec. Biomedical Analysis and Diagnostics 2:1091869, <https://doi.org/10.3389/frans.2022.1091869>
138. Banerjee, P, Veuskens, B, de Jorge, EG, Jozsi, M, Baeumner, AJ; Steiner, MS, Pouw, RB, Toonen, EJM; Pauly, D; Poppelaars, F; “Evaluating the clinical utility of measuring levels of factor H and the related proteins” *Molecular Immunology* (2022) 151, 166 – 182, <https://doi.org/10.1016/j.molimm.2022.08.010>
137. Bauer, M., Duerkop, A., Baeumner, A.J. “Critical review of polymer and hydrogel deposition methods for optical and electrochemical bioanalytical sensors correlated to the sensor’s applicability in real samples.” *Analytical and Bioanalytical Chemistry*, (2022) 415, 83 – 95, <https://doi.org/10.1007/s00216-022-04363-2>
136. Gerstl, F., Pongkitdachoti. U., Unob, F. and Baeumner, A.J. “Miniaturized Sensor for Electroanalytical and Electrochemiluminescent Detection of Pathogens enabled through

Laser-Induced Graphene Electrodes embedded in Microfluidic Channels” *Lab on a Chip* (2022) 22, 3721 – 3733, <https://doi.org/10.1039/D2LC00593J>

135. Wang, Y, Rink, S, Baeumner, A.J., Seidel, M. “Microfluidic flow-injection aptamer-based chemiluminescence platform for sulfadimethoxine detection” *Microchimica Acta* (2022), 189, 117, <https://doi.org/10.1007/s00604-022-05216-6>
134. Perju, A.T., Baeumner, A.J., Wongkaew, N., “Freestanding 3D-interconnected carbon nanofibers as high-performance transducers in miniaturized electrochemical sensors” *Microchimica Acta* (2022), 189, 424, <https://doi.org/10.1007/s00604-022-05492-2>

## 2021

133. Beck, F., Horn, C., Baeumner, A.J., “Dry-reagent microfluidic biosensor for simple detection of NT-proBNP via Ag nanoparticles” *Analytica Chimica Acta*, (2021) 1191, 339375, <https://doi.org/10.1016/j.aca.2021.339375>
132. Rink, S., Kaiser, B., Steiner, M.-S., Duerkop, A., Baeumner, A.J. “Highly sensitive interleukin 6 detection by employing commercially ready liposomes in an LFA” *Analytical and Bioanalytical Chemistry*, (2022) 414: 3231–3241, <https://doi.org/10.1007/s00216-021-03750-5>
131. Yagati, A.K., Behrent, A., Tomanek, V., Chavan, S.G., Go, A., Park, S.R., Jin, Z., Baeumner, A.J., Lee, M. “Polypyrrole-palladium nanocomposite as a high-efficiency transducer for thrombin detection with liposomes as a label” *Analytical Bioanalytical Chemistry* (2021) 3205 - 3217, <https://doi.org/10.1007/s00216-021-03673-1>
130. Rink, S., Duerkop, A., Seidel, M., Jacobi von Wangelin, A., Baeumner, A.J. “Next Generation Luminol Derivative as Powerful Benchmark Probe for Chemiluminescence Assays” *Analytica Chimica Acta*, (2021) 339161, <https://doi.org/10.1016/j.aca.2021.339161>
129. Behrent, A., Griesche, C., Sippel, P., Baeumner, A.J. “Process-property correlations in laser-induced graphene electrodes for electrochemical sensing.” (2021) *Microchim Acta* 188:159, <https://doi.org/10.1007/s00604-021-04792-3>
128. Poppelaars, F., Goicoechea de Jorge, E., Jongerius, I., Baeumner, A.J., Steiner, M.S., Józsi, M., Toonen, E.J.M., Pauly, D. “A Family Affair: Addressing the Challenges of Factor H and the Related Proteins” *Front. Immunol.* (2021) 12:660194, <https://doi.org/10.3389/fimmu.2021.660194>
127. Beck, F., Horn, C., Baeumner, A.J. “Ag Nanoparticles Outperform Au Nanoparticles for the Use as Label in Electrochemical Point-of-Care Sensors” *Analytical and Bioanalytical Chemistry* (2021) 475 – 483, <https://doi.org/10.1007/s00216-021-03288-6>

126. Griesche, C., Hoecherl, K., Baeumner, A.J. “Substrate-Independent Laser-Induced Graphene Electrodes for Microfluidic Electroanalytical Systems” *ACS Applied NanoMaterials* (2021) 3114 – 3121, <http://dx.doi.org/10.1021/acsanm.1c00299>
125. Hermann, C.A., Mayer, M., Griesche, C., Beck, F., Baeumner, A.J. “Microfluidic-enabled magnetic labelling of nanovesicles for bioanalytical applications” *Analyst* (2021) 146: 997 – 1003, <https://doi.org/10.1039/D0AN02027C>

## 2020

124. Mobarez, S. N., Wongkaew, N., Simsek, M., Baeumner, A.J., Duerkop, A. “Dipsticks with Reflectometric Readout of an NIR Dye for Determination of Biogenic Amines” *Chemosensors* (2020), 8, 99, <https://doi.org/10.3390/chemosensors8040099>
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122. Simsek, M.; Hoecherl, K.; Schlosser, M.; Baeumner, A.J.; Wongkaew, N. "Printable 3-D Carbon Nanofiber Networks with Embedded Metal Nanocatalysts" *ACS Applied Materials & Interfaces* (2020) 12 (35): 39533-39540, <https://doi/10.1021/acsami.0c08926>
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119. Baeumner, A.J., Cui, H. Moreno Bondi, M.C., Szunerits, S. “Female Role Models in Analytical Chemistry” Editorial, *Analytical and Bioanalytical Chemistry* (2020) 412, 5873 – 5874, <https://doi.org/10.1007/s00216-020-02763-w>
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## 2019

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