

# List of publications of Prof. Dr. Axel Dürkop (ORCID: 0000-0003-3007-6471)

h-index (01.05.2025): 32

> 3300 citations

## Papers

### In preparation/Submitted

86	Schraml P, Blaser F, Streif S, Dreyman N, Duerkop A, Baeumner A, <b>His-Tag-Aptamer-Liposome-Conjugates as a Multi-Purpose Tool for Recombinant Protein Screening and Protein-based Bioassays</b> , Anal Chem, submitted.
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### Accepted / In press / 2026

85	Rohr L, Stefan N, Bruckmann A, Touraud T, Dürkop A, Sprangers R, Kunz W*, 2026, <b>Mechanistic insights into the preparation and stabilisation of supersaturated pea protein aggregate-curcumin nanoparticles prepared by a pH-driven method</b> , Food Chemistry 514:149156, DOI:10.1016/j.foodchem.2026.149156.
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### 2025

84	Grotz B, Rogalla von Bieberstein K, Wongkaew N, Duerkop A, Frey MW, Baeumner AJ*, 2025, <b>Engineered Nanofiber-Hydrogel Systems for Colorimetric Lactate Sensing from Breath</b> , ACS Applied Materials & Interfaces, DOI: 10.1021/acscami.5c15741. <i>ASAP (as soon as possible) Article, published open access.</i>
83	Galligan JJ, Baeumner AJ, Duerkop A*, 2025, <b>A fluorescent MTP-based detection platform for hydrogen peroxide, glucose, and lactate</b> , Anal Sens, e202500060, DOI:10.1002/anse.202500060. <i>Invited Article</i> <i>This paper was awarded with a journal cover picture.</i>
82	Bimberg BC, Blaser FK, Pidenko PS, Recio Ramos J, Fedotova E, Mueller B, Burmistrova NA*, Baeumner A, Duerkop A*, Jacobi von Wangelin A*, 2025, <b>Fluorescent and Chemiluminescent Dyes with Aryl Phthalimide and Aryl Luminol Chromophores</b> , ChemPhotoChem, e202500064, DOI: 10.1002/cptc.202500064.

### 2024

81	Galligan JJ, Baeumner AJ, Dürkop A*, 2024, <b>Recent advances and trends in optical devices and sensors for hydrogen peroxide detection</b> , TrAC - Trends in Analytical Chemistry, 180:117948, DOI: 10.1016/j.trac.2024.117948
80	Khairy GM*, Goda RM, Anwar ZM, Aboelnga MM, Duerkop A*, 2024, <b>Luminescent and Time-Resolved Determination of Gemifloxacin Mesylate in Pharmaceutical Formulations and Spiked Blood Plasma Samples Using a Lanthanide Complex as a Probe</b> , Anal Methods, 16:2556- 568, DOI: 10.1039/D4AY00236A. <i>Advance Article</i>

## 2023

79	Rink S, Duerkop A, Baeumner AJ*, 2023, <b>Enhanced Chemiluminescence of a Superior Luminol Derivative Provides Sensitive Smartphone-based Point-of-Care Testing with Enzymatic <math>\mu</math>PAD</b> , Analysis & Sensing, e202200111, DOI: 10.1002/anse.202200111. <i>This paper was awarded with a journal cover picture.</i> <i>Wiley Top Cited Article</i>
78	Yegorova A*, Skrypynets Y, Leonenko I, Duerkop A*, 2023, <b>New terbium complex as a luminescent probe for determination of chlorogenic acid in green coffee and roasted coffee infusions</b> , Anal Bioanal Chem, 415:235-244, DOI: 10.1007/s00216-022-04411-x. <i>Paper in Forefront</i>
77	Bauer M, Dürkop A, Baeumner A*, 2023, <b>Critical Review of Polymer and Hydrogel Deposition Methods for Optical and Electrochemical Bioanalytical Sensors Correlated to the Sensor's Applicability in Real Samples</b> , Anal Bioanal Chem, 415:83-95, DOI: 10.1007/s00216-022-04363-2.

## 2022

76	Khairy GM*, Abd El-Naby ZA, Elgindy AMA, Duerkop A*, Abdel Hameed EAM, 2022, <b>Sensitive Determination of Moxifloxacin HCl in Pharmaceuticals or Human Plasma using Luminescence or Eye-vision</b> , Chemosensors, 10, 378, DOI: 10.3390/chemosensors10100378.
75	Rink S, Kaiser B, Steiner M-S, Duerkop A, Baeumner AJ, 2022, <b>Highly Sensitive Interleukin 6 Detection by Employing Commercially Ready Liposomes in an LFA Format</b> , Anal Bioanal Chem, 414:3231-324, DOI:10.1007/s00216-021-03750-5.

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74	Rink S, Duerkop A, von Wangelin AJ, Seidel M, Baeumner AJ, 2021, <b>Next Generation Luminol Derivative as Powerful Benchmark Probe for Chemiluminescence Assays</b> , Anal Chim Acta, 1188, 339161, DOI: 10.1016/j.aca.2021.339161.
73	Voskoboynikova OB, Sukhanov AV, Duerkop A, 2021, <b>Optical pH sensing in milk: a small puzzle of indicator concentrations and the best detection method</b> , Chemosensors, 9, 177 DOI: 10.3390/chemosensors9070177.
72	De Rosa C, Melchior A, Sanadar M, Tolazzi M, Duerkop A, Piccinelli F, 2021, <b>Isoquinoline-based Eu(III) complexes: valuable luminescent probes for citrate sensing in complex matrix</b> , Dalton Trans, 50:4700-4712, DOI: 10.1039/D1DT00511A.
71	Bauer M, Wunderlich L, Weinzierl F, Lei Y, Dürkop A, Alshareef H, Baeumner A, 2021, <b>Electrochemical Multi-Analyte Point-of-Care Perspiration Sensors Using On Chip Three-Dimensional Graphene Electrodes</b> , Anal Bioanal Chem 413:763-777, DOI: 10.1007/s00216-020-02939-4, <i>Paper in Forefront</i>

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70	Mobarez SN, Wongkaew N, Simsek M, Baeumner AJ, Duerkop A*, 2020, <b>Dipsticks with Reflectometric Readout of an NIR Dye for Determination of Biogenic Amines</b> , Chemosensors 8:99, DOI: 10.3390/chemosensors8040099.
69	Hermann CA, Hofmann C, Duerkop A, Baeumner AJ, 2020, <b>Magnetosomes for bioassays by merging fluorescent liposomes and magnetic nanoparticles: Encapsulation and bilayer insertion strategies</b> , Anal Bioanal Chem 412:6295–6305, DOI: 10.1007/s00216-020-02503-0.
68	Danchuk A, Komova NS, Mobarez SN, Doronin SY, Burmistrova NA, Markin AV, Duerkop A*, 2020, <b>Optical Sensors for Determination of Biogenic Amines in Food</b> , Anal Bioanal Chem 412:4023-4036, DOI: 10.1007/s00216-020-02675-9.
67	Hofmann C, Kaiser B, Maerkl S, Duerkop A, Baeumner AJ, 2020, <b>Cationic liposomes for generic signal amplification strategies in bioassays</b> , Anal Bioanal Chem 412: 3383–3393, DOI: 10.1007/s00216-020-02612-w; <i>This article was awarded with a Journal Cover Page.</i>

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66	Mayer M, Hahn M, Gerstl F, Köwer T, Rink S; Kunz W, Duerkop A, Baeumner A*, 2019, <b>Shedding Light on the Diversity of Surfactant Interactions with Luminol Electrochemiluminescence for Bioanalysis</b> , Anal Chem 90:13080-13087, DOI: 10.1021/acs.analchem.9b03275.
65	Waleed Al-Qaisy W, Duerkop A*, 2019, <b>Sensor and sensor microtiterplate with expanded pH detection range and their use in real samples</b> , Sensors & Actuators B Chemical 298:126848, DOI: 10.1016/j.snb.2019.126848.
64	Wongkaew N, Simsek M, von Kruechten L, Buchner M, Duerkop A, Baeumner AJ*, 2019, <b>An efficient post-doping strategy creating electrospun conductive nanofibers with multi-functionalities for biomedical applications</b> , J Mater Chem C 7:9316-9325, DOI: 10.1039/C9TC03238J.
63	Hofmann C, Roth G, Hirsch T, Duerkop A, Baeumner AJ*, 2019 <b>Tethering functionality to lipid interfaces by a fast, simple and controllable post synthesis method</b> , Colloids and Surfaces B: Biointerfaces 181:325–331, DOI: 10.1016/j.colsurfb.2019.05.049
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61	Khairy GM, Duerkop A*, 2019, <b>Dipsticks and Sensor Microtiterplate for Determination of Copper(II) in Drinking Water Using Reflectometric RGB Readout of Digital Images, Fluorescence or Eye-Vision</b> , Sensors & Actuators B Chemical 281:878–884, DOI: 10.1016/j.snb.2018.10.147 <i>This work was awarded with Professor Ahmed Asker's Best Paper Award.</i>
60	Hermann C, Duerkop A, Baeumner A*, 2019, <b>Food Safety Analysis enabled through Biological and Synthetic Materials: A Critical Review of Current Trends</b> , Anal Chem 91:569–587, DOI: 10.1021/acs.analchem.8b04598. <i>Invited review</i>

## 2018

59	Waleed Al-Qaisy W, Duerkop A*, 2018, <b>Luminescent europium complex for wide-range pH sensor and sensor microtiterplate</b> , Analyst 143:3176–3183, DOI: 10.1039/C8AN00775F
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57	Mayer M, Takegami S, Neumeier M, Rink S, Jacobi von Wangelin A, Schulte S, Vollmer M, Griesbeck AG, Duerkop A, Baeumner AJ*, 2018, <b>Electrochemiluminescence Bioassays can outperform Fluorescence assays using a new water-soluble Luminol Derivative</b> , Angew Chem Int Ed 57:408-411, DOI: 10.1002/anie.201708630 and 10.1002/ange.201708630

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55	Kirschbaum-Harriman S, Duerkop A, Baeumner AJ*, 2017, <b>Improving ruthenium-based ECL through nonionic surfactants and tertiary amines</b> , Analyst 142:2648-2653, DOI: 10.1039/C7AN00197E.
54	Kirschbaum-Harriman S, Mayer M, Duerkop A, Hirsch T, Baeumner AJ*, <b>Signal enhancement and low oxidation potential for miniaturized ECL biosensors via N-butyldiethanolamine</b> , Analyst 142:2469-2474, DOI: 10.1039/C7AN00261K.
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52	Boraei ATA*, Gomaa MS, El Ashry SH, Duerkop A, 2017, <b>Design, Synthesis, X-ray Crystal Structure and Chemoselectivity Determination of Dihydro-Indolyl-1,2,4-triazole-3-thione and its 3-Benzylsulfanyl Analogues as Potent Anticancer Agents</b> , Eur J Med Chem 125: 360-371, DOI: 10.1016/j.ejmech.2016.09.046.

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50	Bidmanova S, Steiner M-S, Stepan M, Vymazalova K, Gruber MA, Duerkop A, Damborsky J, Prokop Z, Wolfbeis OS, 2016, <b>Enzyme based test stripes for the visual or reflectometric detection and quantitation of gaseous sulfur mustard</b> , Anal Chem 88:6044-6049, DOI: 10.1021/acs.analchem.6b01272.
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44	Burmistrova NA, Meier RJ, Schreml S, Duerkop A*, 2014, <b>Reusable Optical Sensing Microplate for Hydrogen Peroxide Using a Fluorescent Photoinduced Electron Transfer Probe (HP Green)</b> , Sens Actuat B 193:799-805, doi: 10.1016/j.snb.2013.12.025.

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## Journal Cover Pictures

