

Univ.-Prof. Mag. Dr. Christian Huck

List of publications (all papers)

2024

399. Czarnecki, MA; Warchol, J; Orzechowski, K; Bec, K; Huck, CW

Soft confinement of water in aliphatic alcohols: MIR/NIR spectroscopic and DFT studies

Spectrochim. Acta A, 2024, 323, 124851

DOI: 10.1016/j.saa.2024.124851

389. Tonauer, CM; Köck, EM; Henn, R; Stern, JN; del Rosso, L; Celli, M; Kappacher, C; Leiter, S; Kirchler, CG; Huck, CW; Loerting, T

Near-infrared Spectroscopy for Remote Sensing of Porosity, Density, and Cubicity of Crystalline and Amorphous H₂O Ices in Astrophysical Environments

The Astrophys. J, 2024, 970/82

DOI: 10.3847/1538-4357/ad4f82

388. Hofer, R.; Schlappack, T.; Huck, C.W.; Rainer, M.

Selective solid phase extraction of phototoxic furanocoumarins using molecularly imprinted polymers

J. Chromatogr. Open, 2024, 5, 100133

DOI: 10.1016/j.jcoa.2024.100133

387. Lauß, J.; Kappacher, C.; Isser, O.; Huck, C.W.; Rainer, M.

Species-Specific quantification of bioactive boswellic acids in Boswellia resin using NIR spectroscopy, HPLC and Multivariate data analysis

Spectrochim. Acta A, 2024, 316, 124384

DOI: 10.1016/j.saa.2024.124384

386. Brunner, A.; Unterberger, S.H.; Auer, H.; Hautz, T.; Schneeberger, S.; Stalder, R.; Badzoka, J.; Kappacher, C.; Huck, C.W., Zelger B.

Suitability of Fourier transform infrared microscopy for the diagnosis of cystic echinococcosis in human tissue sections

J. Biophotonics, 2024, e202300513

DOI: 10.1002/jbio.202300513

385. Huck, C.W.

Representing NIR spectroscopy at SciX 2023

NIR news, 2024, 1-4

DOI: 10.1177/09603360241228938

384. Schmidt, V.M.; Zelger, P.; Wöss, C.; Fodor, M.; Hautz, T.; Schneeberger, S.; Huck, C.W.; Arora, R.; Brunner, A.; Zelger, B.; Schirmer, M.; Pallua, J.D.

Handheld hyperspectral imaging as a tool for the post-mortem interval estimation of human skeletal remains.

Heliyon 2024, e25844

DOI: 10.1016/j.heliyon.2024.e25844

383. Kappacher, C.; Schwarz, B.; Rainer, M.; Huck, C.W.

Unveiling the synergy of NIRS and enrichment technologies: A comprehensive review of in-sorbent based detection and quantification strategies

Spectrochim. Acta A 2024, 310, 123955

DOI: 10.1016/j.saa.2024.123955

382. Hernandez-Jimenez, M.; revilla, I.; Vivar-Quintana, A.M.; Grabska, J.; Bec, K.B.; Huck, C.W.
Performance of benchtop and portable spectroscopy equipment for discriminating Iberian ham according to breed

Curr. Res. Food Sci 2024, 8, 100675

DOI: 10.1016/j.crfs.2024.100675

381. Lindtner, R.A.; Wurm, A.; Pirchner, E.; Putzer, D.; Arora, R.; Coraca-Huber, D.; Schirmer, M.; Badzoka, J.; Kappacher, J.; Kappacher, C.; Huck, C.W.; Pallua, J.D.

Enhancing Bone Infection Diagnosis with Raman Handheld Spectroscopy: Pathogen Discrimination and Diagnostic Potential

Int. J. Mol. Sci. 2024, 25, 541

DOI: 10.3390/ijms25010541

2023

380. Grabska, J.; Huck, C.W.

Countdown to NIR 2023 Innsbruck

NIR News 2023, 34, 5-7

DOI: 10.1177/09603360231196673

379. Zelger, P.; Brunner, A.; Zelger, B.; Willenbacher, E.; Unterberger, S.; Stalder, R.; Huck, C.W.; Willenbacher, W.; Pallua, J.D.:

Deep learning analysis of mid-infrared microscopic imaging data for the diagnosis and classification of human lymphomas.

J. Biophotonics 2023, 16, e202300015

DOI: 10.1002/jbio.202300015

378. Fodor, M.; Zelger, P.; Pallua, J.D.; Huck, C.W.; Hofmann, J.; Otashvili, G.; Pühringer, M.; Zelger, B.; Hermann, M.; Resch, T.; Cardini, B.; Oberhuber, R.; Öfner, D.; Sucher, R.; Hautz, T.; Schneeberger, S.

Prediction of biliary complications after human liver transplantation using hyperspectral imaging and convolutional neural networks: a proof-of-concept study

Transplantation 2023, 10.1097

DOI: 10.1097/TP.0000000000004757

377. Lindtner, R.; Wurm A.; Kugel, K.; Kühn, J.; Putzer, D.; Arora, R.; Coraca-Huber, D.C.; Zelger, P.; Schirmer, M.; Badzoka, J.; Kappacher, C.; Huck, C.W.; Pallua, J.D.

Comparison of mid-infrared handheld and benchtop spectrometers to detect staphylococcus epidermidis in bone grafts

Bioengineering 2023, 10, 1018

DOI: 10.3390/bioengineering10091018

376. Bec, K.B.; Huck, C.W.

Analytische Vorteile der Nahinfrarot-Spektroskopie. Eine ökonomische Alternative zur konventionellen Analytik.

GIT Labor-Fachzeitschrift 2023, 5/6, 40-41

375. Woess, C.; Huck, C.W.; Badzoka, J.; Kappacher, C.; Arora, R.; Lindtner, R.A.; Zelger, P.; Schirmer, M.; Rabl, W.; Pallua, J.

Raman spectroscopy for post-mortem interval estimation of human skeletal remains: A scoping review

J. Biophotonics 2023, 16, e202300189

DOI: 10.1002/jbio.202300189

374. Beć, K.B.; Huck, C.W.

Good vibrations, smooth contours at NIR 2023 Innsbruck: A preview of the conference

NIR News 2023, 34, 15-28

DOI: 10.1177/09603360231179427

373. Czarnecki, M.A.; Beć, K.B.; Grabska, J.; Huck, C.W.; Mazurek, S.; Orzechowski, K.

State of water in various environments: aliphatic ketones. MIR/NIR spectroscopic, dielectric and theoretical studies

Spectrochim. Acta A 2023, 302, 123057

DOI: 10.1016/j.saa.2023.123057

372. Schlappack, T.; Kappacher, C.; Demetz, M.; Jakschitz, T.; Bonn, G.K.; Huck, C.W.; Rainer, M.

Ambient mass spectrometry and near-infrared spectroscopy – a direct comparison of methods for the quantification of sucralose in e-liquids

Anal. Methods 2023,15, 2448-2455

DOI: 10.1039/d3ay00380a

371. Grabska, J.; Bec, K.B.; Huck, C.W.

Analyzing the quality parameters of apples by spectroscopy from Vis/NIR to NIR region: A comprehensive review

Foods 2023, 12, 1946

DOI: 10.3390/foods12101946

370. Bec, K.B.; Grabska, J.; Huck, C.W.

Xiaoli Chu, Yue Huang, Yong-Huan Yun, Xihui Bian: Chemometric methods in analytical spectroscopy technology

Anal. Bioanal. Chem. 2023, 415, 2147–2149

DOI: 10.1007/s00216-023-04642-6

369. Brunner, A.; Willenbacher, E.; Willenbacher, W.; Zelger, B.; Zelger, P.; Huck, C.W.; Pallua, J.D.

Visible- and near-infrared hyperspectral imaging for the quantitative analysis of PD-L1+ cells in human lymphomas: Comparison with fluorescent multiplex immunohistochemistry

Spectrochim. Acta A 2023, 285, 121940

DOI: 10.1016/j.saa.2022.121940

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368. Schlappack, T.; Weidacher, N.; Huck, C.W. Bonn, G.K.; Rainer, M.

Effective solid phase extraction of toxic pyrrolizidine alkaloids from honey with reusable organosilyl-sulfonated halloysite nanotubes

Separations 2022, 9, 270

DOI: 10.3390/separations9100270

367. Grabska, J.; Mizaikoff, B.; Huck, C.W.

Summary of the 12th Advanced Study Course on Optical Chemical Sensors – ASCOS 2022, Obergurgl, Austria

NIR News 2022, 33, 13-14

DOI: 10.1177/09603360221143435

366. Beć, K.B.; Huck, C.W.

NIR spectroscopy sessions among other disciplines of analytical chemistry – The Great Scientific Exchange 2022 in Cincinnati

NIR News 2022, 33, 15-17

DOI: 10.1177/09603360221143436

365. Costa, F.; Zanella, A.; Huck, C.W.; Busatto, N.; Populin, F.; Stürz, S.; Folie, I.; Biasioli, F.; Farneti, B.; Vrhovsek, U.; Ueno, N.; Vittani, L.; Grabska, J.; Beć, K.B.

“Scald-Cold”: comprehensive dissection of the superficial scald in apple

Acta Hort. 2022, 1344, 7-12

DOI: 10.17660/ActaHortic.2022.1344.2

364. Mizaikoff, B.; Huck, C.W.

12th Advanced Study Course on Optical Chemical Sensors 15–22 October 2022 – Obergurgl (Austria). Optical (bio)sensing for life science and environmental applications

NIR News 2022, 33, 13-15

DOI: 10.1177/09603360221122382

363. Huck, C.W.

The Gerald S. Birth Award 2022 goes to Professor Christian Huck

NIR News 2022, 33, 8-9

DOI: 10.1177/09603360221122659

362. Huck, C.W.

Welcome to NIR 2023 Innsbruck!

NIR News 2022, 33, 5-7

DOI: 10.1177/09603360221122660

361. Schlappack, T.; Kappacher, C.; Rainer, M.; Huck, C.W.; Bonn, G.K.

New sensitive ambient mass spectrometric method combined with chemometric modelling for the analysis of Equisetum palustre L. contaminations in the traditional herb Equiseti herba

J. Appl. Res. Med. Aromat. Plants 2022, 30, 100396

DOI: 10.1016/j.jarmap.2022.100396

360. Wurm, A.; Kühn, J.; Kugel, K.; Putzer, D.; Arora, R.; Coraça-Huber, D.C.; Zelger, P.; Badzoka, J.; Kappacher, C.; Huck, C.W.; Pallua, J.D.

Raman microscopic spectroscopy as a diagnostic tool to detect Staphylococcus epidermidis in bone grafts

Spectrochim. Acta A 2022, 280, 121570

DOI: 10.1016/j.saa.2022.121570

359. Beć, K.B.; Grabska, J.; Huck, C.W.

In silico NIR spectroscopy – A review. Molecular fingerprint, interpretation of calibration models, understanding of matrix effects and instrumental difference

Spectrochim. Acta A 2022, 279, 121438

DOI: 10.1016/j.saa.2022.121438

358. Beć, K.B.; Grabska, J. Huck, C.W.

Miniaturized NIR spectroscopy in food analysis and quality control: promises, challenges, and perspectives

Foods 2022, 11, 1465

DOI: 10.3390/foods11101465

357. Schmidt, V.M.; Zelger, P.; Wöss, C.; Huck, C.W.; Arora, R.; Bechtel, E.; Stahl, A.; Brunner, A.; Zelger, B.; Schirmer, M.; Rabl, W.; Pallua, J.D.

Post-mortem interval of human skeletal remains estimated with handheld NIR spectrometry

Biology 2022, 11, 1020

DOI: 10.3390/biology11071020

356. Moll, V. Beć, K.B.; Grabska, J. Huck, C.W.

Investigation of water interaction with polymer matrices by near-infrared (NIR) spectroscopy

Molecules 2022, 27, 5882

DOI: 10.3390/molecules27185882

355. Grabska, J.; Beć, K.B.; Huck, C.W.

Theoretical simulation of near-infrared spectrum of piperine. Insight into band origins and the features of regression models from different spectrometers

In: Chu, X.; Guo, L.; Huang, Y.; Yuan, H. (Eds.): ICNIR 2021, Sense the Real Change: Proceedings of the 20th International Conference on Near Infrared Spectroscopy, Chemical Industry Press, 2022, pp. 253-261

DOI: 10.1007/978-981-19-4884-8_27

354. Huck, C.W.; Beć, K.B.; Grabska, J.

Current status and future trends in sensor miniaturization

In: X. Chu, X.; Guo, L.; Huang, Y.; Yuan, H. (Eds.): ICNIR 2021, Sense the Real Change: Proceedings of the 20th International Conference on Near Infrared Spectroscopy, Chemical Industry Press, 2022, pp. 59–72

DOI: 10.1007/978-981-19-4884-8_5

353. Beć, K.B.; Grabska, J. Huck, C.W.

The new avenue – theoretical simulation of NIR spectra and its potential in analytical applications

In: Chu, X.; Guo, L.; Huang, Y.; Yuan, H. (Eds.): ICNIR 2021, Sense the Real Change: Proceedings of the 20th International Conference on Near Infrared Spectroscopy, Chemical Industry Press, 2022, pp. 32–46

DOI: 10.1007/978-981-19-4884-8_3

352. Beć, K.B.; Huck, C.W.

Miniaturization in NIR spectroscopy reshapes chemical analysis

BioPhotonics 2022, 29, 44-51

351. Huck, C.W.; Beć, K.B.; Grabska, J.

Portable near-infrared sensors in medicinal plant quality control.

European Pharmaceutical Review 2022

350. Beć, K.B.; Grabska, J.; Huck, C.W.

'Near-Infrared Spectroscopy Theory, Spectral Analysis, Instrumentation, and Applications' ranks top 2% among downloaded Springer books in the field of chemistry and materials science.

NIR News 2022, 33, 20-21

DOI: 10.1177/09603360221079454

349. Crocombe, R.; Beć, K.B.; Grabska, J.; Huck, C.W.

SciX 2021 summary including NIR spectroscopy session

NIR News 2022, 33, 18-19

DOI: 10.1177/09603360221076352

348. Kappacher, C.; Trübenbacher, B.; Losso, K.; Rainer, M.; Bonn, G.K.; Huck, C.W.

Portable vs. benchtop NIR-sensor technology for classification and quality evaluation of black truffle

Molecules 2022, 27, 589

DOI: 10.3390/molecules27030589

347. Harder, M.; Bakry, R.; Lackner, F.; Mayer, P.; Kappacher, C.; Grießer, C.; Neuner, S.; Huck, C.W.; Bonn, G.K.; Rainer, M.

The crosslinker matters: vinylimidazole-based anion exchange polymer for dispersive solid-phase extraction of phenolic acids

Separations 2022, 9, 72

DOI: 10.3390/separations9030072

346. Brunner, A.; Schmidt, V.M.; Zelger, B.; Woess, C.; Arora, R.; Zelger, P.; Huck, C.W.; Pallua, J.

Visible and Near-Infrared hyperspectral imaging (HSI) can reliably quantify CD3 and CD45 positive inflammatory cells in myocarditis: Pilot study on formalin-fixed paraffin-embedded specimens from myocard obtained during autopsy

Spectrochim. Acta A 2022, 274, 121092

DOI: 10.1016/j.saa.2022.121092

345. Losso, K.; Beć, K.B.; Mayr, S.; Grabska, J.; Stuppner, S.; Jones, M.; Jakschitz, T.; Rainer, M.; Bonn, G.K.; Huck, C.W.

Rapid discrimination of Curcuma longa and Curcuma xanthorrhiza using direct analysis in real time mass spectrometry and near infrared spectroscopy

Spectrochim. Acta A 2022, 265, 120347

DOI: 10.1016/j.saa.2021.120347

344. Gigopulu, O.; Geskovski, N.; Stefkov, G.; Gjorgievska, V.S.; Spirevska, I.S.; Huck, C.W.; Makreski, P.

A unique approach for in-situ monitoring of the THCA decarboxylation reaction in solid state

Spectrochim. Acta A 2022, 267, 120471

DOI: 10.1016/j.saa.2021.120471

343. Mayr, S.; Strasser, S.; Kirchler, C.G.; Meischl, F.; Stuppner, S.; Beć, K.B.; Grabska, J.; Sturm, S.; Popp, M.; Stuppner, H.; Bonn, G.K.; Huck, C.W.

Quantification of Silymarin in Silybi mariani fructus: challenging the analytical performance of benchtop vs. handheld NIR spectrometers on whole seeds.

Planta Medica 2022, 88, 20-32.

DOI: 10.1055/a-1326-2497

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342. Huck, C.W.

SAS – Society for Applied Spectroscopy Fellow Award for Christian Huck

NIR News 2021, 32, 5-6

DOI: 10.1177/09603360211067097

341. Beć, K.B.; Grabska, J.; Huck, C.W.; Mazurek S.; Czarnecki, M.A.

Anharmonicity and structure–structure correlations in MIR and NIR Spectra of crystalline menadione (Vitamin K₃)

Molecules 2021, 26, 6779

DOI: 10.3390/molecules26226779

340. Beć, K.B.; Grabska, J.; Plewka, N.; Huck, C.W.

Insect protein content analysis in handcrafted fitness bars by NIR spectroscopy. Gaussian process regression and data fusion for performance enhancement of miniaturized cost-effective consumer-grade sensors

Molecules 2021, 26, 6390

DOI: 10.3390/molecules26216390

339. Grabska, J.; Beć, K.B.; Mayr, S.; Huck, C.W.

Theoretical simulation of near-infrared spectrum of piperine. Insight into band origins and the features of regression models

App. Spectr. 2021 75, 1022-1032

DOI: 10.1177/00037028211027951

338. Grabska, J.; Beć, K.B.; Ozaki, Y.; Huck, C.W.

Anharmonic DFT study of near-infrared spectra of caffeine. Vibrational analysis of the second overtones and ternary combinations

Molecules 2021, 26, 5212

DOI: 10.3390/molecules26175212

337. Beć, K.B.; Grabska, J.; Huck, C.W.

The comprehensive sourcebook for modern NIR spectroscopy: A commentary on “Near-Infrared Spectroscopy Theory, Spectral Analysis, Instrumentation, and Applications”

NIR News 2021, 32, 5-10

DOI: 10.1177/09603360211003752

336. Grabska, J.; Beć, K.B.; Huck, C.W.

Novel near-infrared (NIR) and Raman spectroscopic technologies for print and photography identification, classification and authentication

NIR News 2021, 32, 11-16

DOI: 10.1177/09603360211003757

335. Ozaki, Y.; Bec, KB; Morisawa, Y.; Yamamoto, S.; Tanabe, I.; Huck, C.W.; Hofer, T.S.

Advances, challenges and perspectives of quantum chemical approaches in molecular spectroscopy of the condensed phase

Chem. Soc. Rev. 2021, 50, 10917-10954

DOI:10.1039/d0cs01602k

334. Kappacher, C.; Neurauter, M.; Rainer, M.; Bonn, G.K.; Huck, C.W.

Innovative combination of dispersive solid phase extraction followed by NIR-detection and multivariate data analysis for prediction of total polyphenolic content.

Molecules 2021, 26, 4807

DOI: 10.3390/molecules26164807

333. Pallua, J.D.; Brunner, A.; Zelger, B.; Huck, C.W.; Schirmer, M.; Laimer, J.; Putzer, D.; Thaler, M.; Zelger, B.

New perspectives of hyperspectral imaging for clinical research

NIR News 2021, 32, 3-4

DOI: 10.1177/09603360211024971

332. Willenbacher, E.; Brunner, A.; Zelger, B.; Unterberger, S.H.; Stalder, R.; Huck, C.W.; Willenbacher, W.; Pallua, J.D.

Application of mid-infrared microscopic imaging for the diagnosis and classification of human lymphomas

J. Biophotonics 2021, 14, e202100079

DOI: 10.1002/jbio.202100079

331. Beć, K.B.; Grabska, J.; Badzoka, J.; Huck, C.W.

Spectra-structure correlations in NIR region of polymers from quantum chemical calculations. The cases of aromatic ring, C=O, C≡N and C-Cl functionalities

Spectrochim. Acta A 2021, 262, 120085

DOI: 10.1016/j.saa.2021.120085

330. Guo, L.P.; Li Zhou, J.; Wang, S.; Kang, C.Z.; Huck, C.W.

Simultaneous quantification of 14 compounds in *Achillea millefolium* by GC-MS analysis and near-infrared spectroscopy combined with multivariate techniques.

J. Anal. Methods Chem. 2021, 2021, 5566612.

DOI: 10.1155/2021/5566612

329. Beć, K.B.; Grabska, J.; Huck, C.W.

Principles and applications of miniaturized near-infrared (NIR) spectrometers

Chemistry - A European Journal 2021, 27, 1514-1532

DOI: 10.1002/chem.202002838

328. Beć, K.B.; Grabska, J.; Huck, C.W.

Current and future research directions in computer-aided near-infrared spectroscopy: a perspective

Spectrochim. Acta A 2021, 254, 119625

DOI: 10.1016/j.saa.2021.119625

327. Mayr, S.; Beć, K.B.; Grabska, J.; Wiedemair, V.; Pürgy, V.; Popp, M.A.; Bonn, G.K.; Huck, C.W.

Challenging handheld NIR spectrometers with moisture analysis in plant matrices: Performance of PLSR vs. GPR vs. ANN modelling

Spectrochim. Acta A 2021, 249, 119342

DOI: 10.1016/j.saa.2020.119342

326. Geskovski, N.; Stefkov, G.; Gigopulu, O.; Stefov, S.; Huck, C.W.; Makreski, P.

Mid-infrared spectroscopy as process analytical technology tool for estimation of THC and CBD content in Cannabis flowers and extracts

Spectrochim. Acta A 2021, 251, 119422

DOI: 10.1016/j.saa.2020.119422

325. Tonauer, C.M.; Köck, E.-M.; Gasser, T.M.; Fuentes-Landete, V.; Henn, R.; Mayr, S.; Kirchler, C.G.; Huck, C.W.; Loerting, T.

Near-infrared spectra of high-density crystalline H₂O ices II, IV, V, VI, IX, and XII

J. Phys. Chem. A 2021, 125, 1062–1068

DOI: 10.1021/acs.jpca.0c09764

324. Laimer, J.; Bruckmoser, E.; Helten, T.; Kofler, B.; Zelger, B.; Brunner, A.; Zelger, B.; Huck, C.W.; Tappert, M.; Rogge, D.; Schirmer, M.; Pallua, J.D.

Hyperspectral imaging as a diagnostic tool to differentiate between amalgam tattoos and other dark pigmented intraoral lesions

J. Biophotonics 2021, 14, e202000424

DOI: 10.1002/jbio.202000424

323. Eisenstecken, D.; Stanstrup, J.; Robatscher, P.; Huck, C.W.; Oberhuber, M.

Fatty acid profiling of bovine milk and cheese from six European areas by GC-FID and GC-MS

Int. J. Dairy Technol 2021, 74, 215-224

DOI: 10.1111/1471-0307.12749

322. Mayr, S.; Beć, K.B.; Grabska, J.; Schneckenreiter, E.; Huck, C.W.

Near-infrared spectroscopy in quality control of Piper nigrum: A Comparison of performance of benchtop and handheld spectrometers

Talanta 2021, 223, 121809

DOI: 10.1016/j.talanta.2020.121809

321. Mayr, S.; Schmelzer, J.; Kirchler, C.G.; Pezzej, C.K.; Beć, K.B.; Grabska, J.; Huck, C.W.

Theae nigrae folium: Comparing the analytical performance of benchtop and handheld near-infrared spectrometers

Talanta 2021, 221, 121165

DOI: 10.1016/j.talanta.2020.121165

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Cell-specific expression of Hfe determines the outcome of Salmonella enterica serovar Typhimurium infection in mice

Haematologica - The Hematology Journal 2021, 106, 3149-3161.

DOI: 10.3324/haematol.2019.241745

2020

319. Stuppner, S.; Meischl, F.; Strolz, D.; Mayr, S.; Hussain, S.; Rainer, M.; Huck, C.W.; Jakschitz, T.; Bonn, G.K.

Stability and recovery influences of benzo[a]pyrene, benzo[a]anthracene, benzo[b]fluoranthene, and chrysene during sample preparation of plant matrices

LCGC Europe 2020, 33, 378-387

318. Hawthorne, L.M.; Beganović, A.; Schwarz, M.; Noordanus, A.W.; Prem, M.; Zapf, L.; Scheibel, S.; Margreiter, G.; Huck, C.W.; Bach, K.

Suitability of biodegradable materials in comparison with conventional packaging materials for the storage of fresh pork products over extended shelf-life periods.

Foods 2020, 9, 1802

DOI: 10.3390/foods9121802

317. Beć, K.B.; Grabska, J.; Huck, C.W.

NIR spectral analysis of natural medicines supported by novel instrumentation, methods of data analysis and interpretation.

J. Pharm. Biomed. Anal. 2020, 193, 113686

DOI: 10.1016/j.jpba.2020.113686

316. Beć, K.B.; Grabska, J.; Huck, C.W.

Biomolecular and bioanalytical applications of infrared spectroscopy – A review.

Anal. Chim. Acta 2020, 1133, 150-177

DOI: 10.1016/j.aca.2020.04.015

315. Beć, K.B.; Grabska, J.; Bonn, G.K.; Popp, M.; Huck, C.W.

Principles and applications of vibrational spectroscopic imaging studies in plant science: a review.

Frontiers in Plant Science 2020, 11, 1226

DOI: 10.3389/fpls.2020.01226

314. Beć, K.B.; Grabska, J.; Huck, C.W.

Near-infrared spectroscopy in bio-applications.

Molecules 2020, 25, 2948

DOI: 10.3390/molecules25122948

313. Stuppner, S.; Mayr, S.; Beganovic, A.; Beć, K.B.; Grabska, J.; Aufschneider, U.; Groeneveld, M.; Rainer, M.; Jakschitz, T.; Bonn, G.K.; Huck, C.W.

Near infrared spectroscopy as a rapid screening method for the determination of total anthocyanin content in sambucus fructus.

Sensors 2020, 20, 4983

DOI: 10.3390/s20174983

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Profiling of mitochondrial DNA heteroplasmy in a prospective oral squamous cell carcinoma study.

Cancers 2020, 12, 1933

DOI: 10.3390/cancers12071933

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Solvation effects on wavenumbers and absorption intensities of the OH-stretch vibration in phenolic compounds - electrical - and mechanical anharmonicity via a combined DFT/Numerov approach.

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DOI: 10.1039/c9cp05594k

310. Khuwijtjaru, P.; Boonyapisompan, K.; Huck, C.W.

Near-infrared spectroscopy with linear discriminant analysis for green 'Robusta' coffee bean sorting.

International Food Research Journal 2020, 27, 287 – 294

309. Beganović, A.; Beć, K.B.; Grabska, J.; Stanzl, M.T.; Brunner, M.E.; Huck, C.W.

Vibrational coupling to hydration shell – Mechanism to performance enhancement of qualitative analysis in NIR spectroscopy of carbohydrates in aqueous environment.

Spectrochim. Acta A 2020, 237, 118359

DOI: 10.1016/j.saa.2020.118359

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