CURRICULUM VITAE

Prof. Hazem M. Kalaji

Warsaw University of Life Sciences (SGGW)
Department of Plant Physiology
Institute of Biology
Nowoursynowska 166, 02-776 Warszawa
Tel. (+48 22) 593 25 30, 593 25 21
Mobile: +48 664943484
hazem@kalaji.pl

Institute of Technology and Life Sciences ITP, Falenty, PL
Expert and Consultant, European Commission, BE
Member of UK Controlled Environment Users' Group, UK
Editor-in-Chief - Journal of Water and Land Development, ITP & PAN
Associate Editor - Photosynthetica, Springer
Editorial Advisory Board:
- Plant Physiology and Biochemistry, Elsevier
- Environmental and Experimental Botany, Elsevier
- PeerJ, O'Reilly and SAGE
- Plants, MDPI
- Stresses, MDPI
Scientific consultant in Central & Eastern Europe and the Middle East:
http://www.hansatech-instruments.com/
http://ppsystems.com/
http://www.bbe-moldaenke.de/en/
http://www.skyeinstruments.com/
Polish Scholarly Bibliography (PBN) ID: 922205
Researcher's ID: E-8086-2012 - http://www.researcherid.com/rid/E-8086-2012
ORCID: http://orcid.org/0000-0002-3833-4917
Scopus Author ID: 6504454079
Loop profile: 82058
http://www.scopus.com/authid/detail.url?authorId=6504454079
Phone: +48 664 943 484
Email: hazem@kalaji.pl
https://sites.google.com/a/kalaji.pl/kalaji/

Fields of expertise: Cell biology; Stress physiology; Climate change; Chloroplasts; Molecular mechanisms of photosynthesis; Photosynthetic productivity; Photosynthetic efficiency; Chlorophyll fluorescence; Plant talk; Phenotyping; Machine learning; Artificial intelligence; remote monitoring; Silicon and effective microorganisms; Plants as anti-virus natural filter.

Bibliometric data

Achievement	Sum
Summary Impact Factor (IF)	>400
Index H. (Hirscha)	30
Citations number (without self-citation) as ISI Web of Science	3449
Publications (including books and books chapter)	186
Journals' Editor	12
Presentation at conferences (in Eng. and Pol)	64
Posters (in Eng. and Pol)	73
Membership in Scientific Commissions	5
Principal Investigator/ coordinator of projects	4
Contractor in research projects (National, European and International)	8
Conducted lectures and scientific seminars (domestic and foreign)	44
Completed PhD supervision (suprvisor)	10
Participation in the organizational committees of international and national scientific conferences	11
Organization of seminars and scientific workshops	18
Internships abroad	5
Reviewing PhD thesis	12
Reviewing Doctor of Science achievements (habilitation)	2
Reviewing/evaluating projects' applications for National, European and International projects	806
Reviewing manuscripts published in International Journals having IF	151

EDUCATION

2019 – Full professorship in biology, specialty: Plant Physiology, Warsaw University of Life Sciences

2013 - Habilitation degree in Agricultural Sciences in the field of Agronomy, specialty: Plant Physiology, Warsaw University of Life Sciences (distinction of scientific achievements by the Habilitation Committee and the Council of the Faculty of Agriculture and Biology of the Warsaw University of Life Sciences).

1993- Ph.D. in Agricultural Sciences in the field of Agronomy, specialty: Plant Physiology, Warsaw University of Life Sciences in SGGW (Distinction of the Agricultural Faculty Council of the Warsaw University of Life Sciences). Work titled 'Salinity effects of NaCl on growth and gas exchange of barley (*Hordeum vulgare* L.) seedlings'. Promoter prof. Emil Nalborczyk.

1983 - Master's degree in agriculture, Agricultural University, University of Aleppo, Syria. Work titled "Crop yield of wheatgrass (*Agropyron spp.*) Under drought conditions", Promoter prof. Nazir Sankari.

PROCESS OF EMPLOYMENT

Date	Place	Employer	Position	Task
XII.2019 –	Warsaw	SGGW, Department of Plant Physiology	Professor	Scientific research and lectures
III.2018 – XIII.2019	Bialystok-Poland	White Hill Company	Grant Coordinator 'TRIFFID"	Scientific research
20.XI.2017 –	Falenty-Poland	Institute of Technology and Life Sciences (ITP)	Senior specialist in engineering and technical matters	Scientific research
I.2017 – XII.2017	Warsaw, Poland	SITECHNOLOGY Company	Director for Research and Technological Development (RTD)	Scientific research
X.2015 – XII.2019	Warsaw	SGGW, Department of Plant Physiology	Associate Professor	Scientific research and lectures
VIII.2013 – IX.2015	Warsaw	SGGW, Department of Plant Physiology	Adjunct appointed faculty	Scientific research and lectures
XII.2000 – VII.2013	Warsaw	SGGW, Department of Plant Physiology	Adjunct appointed faculty	Scientific research and lectures
IX.2001 – XII.2001	Bern, Switzerland	University of Bern	Adjunct appointed faculty	Scientific research and lectures
VI.1999 – VIII.1999	Kraków	Forest Research Institute	Senior specialist	Scientific research and lectures
II.1996 – IX.1996	Warsaw	SGGW, Department of Plant Physiology	Adjunct appointed faculty	Scientific research and lectures

I.1995 – XII.1995	Warsaw	SGGW, Department of Plant Physiology	Adjunct appointed faculty	Scientific research and lectures
X.1993 – VIII.1994	Warsaw	SGGW, Department of Plant Physiology	Senior specialist	Scientific research and lectures
XII.1985 – VI.1993	Aleppo, Syria	Faculty of Agriculture, Aleppo University, Syria	Assistant professor	Scientific research and lectures

PUBLICATION LIST

1. Kalaji Mohamed Hazem, Hayat Touchan: Basics and applications of chlorophyll fluorescence in plant sciences, 2020, Noor Publishing, ISBN 978-620-0-77758-4, 224 s.
2. Kalaji Mohamed Hazem, Dąbrowski Piotr, Janaszek-Mańkowska Monika [i in.]: Produkcja fotosyntetyczna i wzrost wybranych gatunków roślin szklarniowych w obecności stresów abiotycznych, w: Badania z zakresu nauk przyrodniczych – nowe trendy / Danielewska Alicja, Maciąg Monika (red.), 2020, Wydawnictwo Naukowe TYGIEL, ISBN 978-83-66489-08-0, ss. 7-22
3. Al-Sammarraie Omar N., Alsharafa Khalid Y., Al-limoun Muhamad O. [i in.]: Effect of various abiotic stressors on some biochemical indices of Lepidium sativum plants, w: Scientific Reports, vol. 10, nr 1, 2020, ss. 1-10, Numer artykułu:21131, DOI:10.1038/s41598-020-78330-1
4. Borawska-Jarmułowicz Barbara, Mastalerczuk Grażyna, Dąbrowski Piotr [i in.]: Improving tolerance in seedlings of some Polish varieties of Dactylis glomerata to water deficit by application of simulated drought during seed germination, w: Photosynthetica, vol. 58, nr SPECIAL ISSUE, 2020, ss. 540-548, DOI:10.32615/ps.2020.007
5. Cetner Magdalena , Kalaji Mohamed, Borucki Wojciech [i in.]: Phosphorus deficiency affects the I-step of chlorophyll a fluorescence induction curve of radish, w: Photosynthetica, vol. 58, nr SPECIAL ISSUE, 2020, ss. 671-681, DOI:10.32615/ps.2020.015
6. Çiçek N., Kalaji Mohamed, Ekmekçi Y.: Probing the photosynthetic efficiency of some european and anatolian scots pine populations under UV-B radiation using polyphasic chlorophyll a fluorescence transient, w: Photosynthetica, vol. 58, nr SPECIAL ISSUE, 2020, ss. 468-478, DOI:10.32615/ps.2019.151
7. Dimitrova S., Paunov M., Pavlova B. [i in.]: Photosynthetic efficiency of two Platanus orientalis L. ecotypes exposed to moderately high temperature - JIP-test analysis, w: Photosynthetica, vol. 58, nr SPECIAL ISSUE, 2020, ss. 657-670, DOI:10.32615/ps.2020.012
8. Elsheery Nabil I., Helaly Mohamed N., Omar Samar A. [i in.]: Physiological and molecular mechanisms of salinity tolerance in grafted cucumber, w: South African Journal of Botany, vol. 130, 2020, ss. 90-102, DOI:10.1016/j.sajb.2019.12.014
9. Guo Yanjing, Lu Yuping, Goltsev Vasilij [i in.]: Comparative effect of tenuazonic acid, diuron, bentazone, dibromothymoquinone and methyl viologen on the kinetics of Chl a fluorescence rise OJIP and the MR820 signal, w: Plant Physiology and Biochemistry, vol. 156, 2020, ss. 39-48, DOI:10.1016/j.plaphy.2020.08.044

10. Hajihashemi S., Brestic M., Kalaji Mohamed [i in.]: Environmental pollution is reflected in the activity of the photosynthetic apparatus, w: Photosynthetica, vol. 58, nr SPECIAL ISSUE, 2020, ss. 529-539, DOI:10.32615/ps.2019.179
11. Hassannejad Sirous, Lotfi Ramin, Ghafarbi Soheila P. [i in.]: Early identification of herbicide modes of action by the use of chlorophyll fluorescence measurements, w: Plants, vol. 9, nr 4, 2020, ss. 1-10, Numer artykułu:529, DOI:10.3390/plants9040529
12. Horaczek T., Dąbrowski Piotr, Kalaji Mohamed [i in.]: JIP-test as a tool for early detection of the macronutrients deficiency in Miscanthus plants, w: Photosynthetica, vol. 58, nr SPECIAL ISSUE, 2020, ss. 507-517, DOI:10.32615/ps.2019.177
13. Kalaji Mohamed, Goltsev V.: Foreword: Special issue in honour of Prof. Reto J. Strasser, w: Photosynthetica, vol. 58, nr SPECIAL ISSUE, 2020, ss. 1-5, DOI:10.32615/ps.2020.046
14. Loudari Aicha, Benadis Chahinez, Naciri Rachida [i in.]: Salt stress affects mineral nutrition in shoots and roots and chlorophyll a fluorescence of tomato plants grown in hydroponic culture, w: Journal of Plant Interactions, vol. 15, nr 1, 2020, ss. 398-405, DOI:10.1080/17429145.2020.1841842
15. Małkowski Eugeniusz, Sitko Krzysztof, Szopiński Michał [i in.]: Hormesis in plants: The role of oxidative stress, auxins and photosynthesis in corn treated with CD or PB, w: International Journal of Molecular Sciences, vol. 21, nr 6, 2020, ss. 1-21, Numer artykułu:2099, DOI:10.3390/ijms21062099
16. Mubashar Muhammad, Naveed Muhammad, Mustafa Adnan [i in.]: Experimental Investigation of Chlorella vulgaris and Enterobacter sp. MN17 for Decolorization and Removal of Heavy Metals from Textile Wastewater, w: Water, vol. 12, nr 11, 2020, ss. 1-14, Numer artykułu:3034, DOI:10.3390/w12113034
17. RASTOGI A., KOVAR M., HE X. [i in.]: JIP-test as a tool to identify salinity tolerance in sweet sorghum genotypes, w: Photosynthetica, vol. 58, nr SPECIAL ISSUE, 2020, ss. 518-528, DOI:10.32615/ps.2019.169
18. Samborska-Skutnik Izabela, Kalaji Mohamed, Sieczko Leszek [i in.]: Structural and functional response of photosynthetic apparatus of radish plants to iron deficiency, w: Photosynthetica, vol. 58, nr SPECIAL ISSUE, 2020, ss. 205-213, DOI:10.32615/ps.2019.132
19. Siddiqui Manzer H., Alamri Saud, Nasir Khan M. [i in.]: Melatonin and calcium function synergistically to promote the resilience through ROS metabolism under arsenic-induced stress, w: Journal of Hazardous Materials, vol. 398, 2020, ss. 1-16, Numer artykułu:122882, DOI:10.1016/j.jhazmat.2020.122882
20. Swoczyna Tatiana, Mojski Jacek, Baczewska-Dąbrowska Aneta [i in.]: Can we predict winter survival in plants using chlorophyll a fluorescence?, w: Photosynthetica, vol. 58, nr SPECIAL ISSUE, 2020, ss. 433-442, DOI:10.32615/ps.2019.181
21. Ulfat Mobina, Athar Habib-Ur-Rehman, Khan Zaheerud-Din [i in.]: Rnaseq analysis reveals altered expression of key ion transporters causing differential uptake of selective ions in canola (Brassica napus l.) grown under nacl stress, w: Plants, vol. 9, nr 7, 2020, ss. 1-16, Numer artykułu:891, DOI:10.3390/plants9070891
22. Swoczyna Tatiana, Mojski Jacek, Kalaji Mohamed: Can we predict plant frost hardiness using chlorophyll a fluorescence?, w: BotanikerTagung. International Plant Science Conference. Proceedings. Piechulla Birgit (red.), 2019, Universität Rostock, ss. 183-183
23. Baghbani Farhad, Lotfi Ramin, Moharramnejad Sajjad [i in.]: Impact of Fusarium verticillioides on chlorophyll fluorescence parameters of two maize lines, w: European Journal of Plant Pathology, vol. 154, 2019, ss. 337-346, DOI:10.1007/s10658-018-01659-x
24. Bąba Wojciech, Kompała-Bąba Agnieszka, Zabochnicka-Świątek Magdalena [i in.]: Discovering trends in photosynthesis using modern analytical tools :, w: Photosynthetica, vol. 57, nr 2, 2019, ss. 668-679, DOI:10.32615/ps.2019.069
25. Daszkowska-Golec Agata, Collin Anna, Sitko Krzysztof [i in.]: Genetic and physiological dissection of photosynthesis in barley exposed to drought stress, w: International Journal of

Molecular Sciences, vol. 20, nr 24, 2019, ss. 1-27, Numer artykułu:6341, DOI:10.3390/ijms20246341
26. Dąbrowski Piotr, Baczewska-Dąbrowska Aneta, Kalaji Mohamed [i in.]: Exploration of chlorophyll a fluorescence and plant gas exchange parameters as indicators of drought tolerance in perennial ryegrass, w: Sensors, vol. 19, nr 12, 2019, ss. 1-24, Numer artykułu:2736, DOI:10.3390/s19122736
27. Estaji Azam, Kalaji Mohamed, Karimi Hamid [i in.]: How glycine betaine induces tolerance of cucumber plants to salinity stress?, w: Photosynthetica, vol. 57, nr 3, 2019, ss. 753-761, DOI:10.32615/ps.2019.053
28. Farci Domenica, Sanna Cinzia, Medda Rosaria [i in.]: Shedding light on the presymbiontic phase of C. arietinum, w: Plant Physiology and Biochemistry, vol. 143, 2019, ss. 224-231, DOI:10.1016/j.plaphy.2019.09.014
29. Mastalerczuk Grażyna, Borawska-Jarmułowicz Barbara, Kalaji Mohamed: How Kentucky bluegrass tolerate stress caused by sodium chloride used for road de-icing?, w: Environmental Science and Pollution Research, vol. 26, nr 1, 2019, ss. 913-922, DOI:10.1007/s11356-018-3640-4
30. Piano D., Cocco Emma, Guadalupi Giulia [i in.]: Characterization under quasi-native conditions of the capsanthin/capsorubin synthase from Capsicum annuum L, w: Plant Physiology and Biochemistry, vol. 143, 2019, ss. 165-175, DOI:10.1016/j.plaphy.2019.09.007
31. Rapacz Marcin, Wójcik-Jagła Magdalena, Fiust Anna [i in.]: Genome-wide associations of chlorophyll fluorescence OJIP transient parameters connected with soil drought response in barley, w: Frontiers in Plant Science, vol. 10, 2019, ss. 1-24, Numer artykułu:78, DOI:10.3389/fpls.2019.00078
32. Rastogi A., Zivcak M., Tripathi D.K. [i in.]: Phytotoxic effect of silver nanoparticles in triticum aestivum: Improper regulation of photosystem I activity as the reason for oxidative damage in the chloroplast, w: Photosynthetica, vol. 57, 2019, ss. 209-216, DOI:10.32615/ps.2019.019
33. Rastogi Anshu, Stróżecki Marcin, Kalaji Mohamed [i in.]: Impact of warming and reduced precipitation on photosynthetic and remote sensing properties of peatland vegetation, w: Environmental and Experimental Botany, vol. 160, 2019, ss. 71-80, DOI:10.1016/j.envexpbot.2019.01.005
34. Rusinowski Szymon, Krzyżak Jacek, Sitko Krzysztof [i in.]: Cultivation of C4 perennial energy grasses on heavy metal contaminated arable land : impact on soil, biomass, and photosynthetic traits, w: Environmental Pollution, vol. 250, 2019, ss. 300-311, DOI:10.1016/j.envpol.2019.04.048
35. Rusinowski Szymon, Szada-Borzyszkowska Alicja, Zieleźnik-Rusinowska Paulina [i in.]: How autochthonous microorganisms influence physiological status of Zea mays L. cultivated on heavy metal contaminated soils?, w: Environmental Science and Pollution Research, vol. 26, nr 5, 2019, ss. 4746-4763, DOI:10.1007/s11356-018-3923-9
36. Sitko Krzysztof, Rusinowski Szymon, Pogrzeba Marta [i in.]: Development and aging of photosynthetic apparatus of Vitis vinifera L. during growing season, w: Photosynthetica, vol. 57, nr S1, 2019, ss. 1-8, DOI:10.32615/ps.2019.10
37. Sitko Krzysztof, Gieroń Żaneta, Szopiński Michał [i in.]: Influence of short-term macronutrient deprivation in maize on photosynthetic characteristics, transpiration and pigment content, w: Scientific Reports, vol. 9, nr 1, 2019, ss. 1-12, Numer artykułu:14181, DOI:10.1038/s41598-019-50579-1
38. Sulewska Hanna, Ratajczak Karolina, Panasiewicz Katarzyna [i in.]: Can pyraclostrobin and epoxiconazole protect conventional and stay-green maize varieties grown under drought stress?, w: PLoS ONE, vol. 14, nr 8, 2019, ss. 1-17, Numer artykułu:e0221116, DOI:10.1371/journal.pone.0221116
39. Tobiasz-Salach Renata, Kalaji Mohamed, Mastalerczuk Grażyna [i in.]: Can photosynthetic performance of oat (Avena sativa L.) plants be used as bioindicator for their proper growth conditions?, w: Chiang Mai Journal of Science, vol. 46, nr 5, 2019, ss. 880-895

40. Zabochnicka-Świątek Magdalena, Kamizela Tomasz, Kowalczyk Mariusz [i in.]: Inexpensive and universal growth media for biomass production of microalgae, w: Global Nest Journal, vol. 21, nr 1, 2019, ss. 82-89, DOI:10.30955/gnj.002558
41. Alkhsabah I., Alsharafa K.Y., Kalaji Mohamed: Effects of abiotic factors on internal homeostasis of mentha spicata leaves, w: Applied Ecology and Environmental Research, vol. 16, 2018, ss. 2537-2564, DOI:10.15666/aeer/1603_25372564
42. Boguszewska-Mańkowska Dominika, Pieczyński Marcin, Wyrzykowska Anna [i in.]: Divergent strategies displayed by potato (Solanum tuberosum L.) cultivars to cope with soil drought, w: Journal of Agronomy and Crop Science, vol. 204, nr 1, 2018, ss. 13-30, DOI:10.1111/jac.12245
43. Dewez David, Goltsev Vasilij, Kalaji Mohamed [i in.]: Inhibitory effects of silver nanoparticles on photosystem II performance in Lemna gibba probed by chlorophyll fluorescence, w: Current Plant Biology, vol. 16, 2018, ss. 15-21, DOI:10.1016/j.cpb.2018.11.006
44. Helaly Mohamed, El-Sheery Nabil, El-Hoseiny Hanan [i in.]: Impact of treated wastewater and salicylic acid on physiological performance, malformation and yield of two mango cultivars, w: Scientia Horticulturae, vol. 233, 2018, ss. 159-177, DOI:10.1016/j.scienta.2018.01.001
45. Kalaji Mohamed, Račková Lydia, Paganová Viera [i in.]: Can chlorophyll-a fluorescence parameters be used as bio-indicators to distinguish between drought and salinity stress in Tilia cordata Mill?, w: Environmental and Experimental Botany, vol. 152, 2018, ss. 149-157, DOI:10.1016/j.envexpbot.2017.11.001
46. Kalaji Mohamed, Bąba Wojciech, Gediga Krzysztof [i in.]: Chlorophyll fluorescence as a tool for nutrient status identification in rapeseed plants, w: Photosynthesis Research, vol. 136, nr 3, 2018, ss. 329-343, DOI:10.1007/s11120-017-0467-7
47. Kalaji Mohamed, Pathom-aree Wasu, Lotfi Ramin [i in.]: Effect of microbial consortia on photosynthetic efficiency of Arabidopsis thaliana under drought stress, w: Chiang Mai Journal of Science, vol. 45, nr 1, 2018, ss. 1-10
48. Kalaji Mohamed, Rastogi Anshu, Zivcak Marek [i in.]: Prompt chlorophyll fluorescence as a tool for crop phenotyping :, w: Photosynthetica, vol. 56, nr 3, 2018, ss. 953-961, DOI:10.1007/s11099-018-0766-z
49. Keča Nenad, Tkaczyk Milosz, Zółciak Anna [i in.]: Survival of European ash seedlings treated with phosphite after infection with the Hymenoscyphus fraxineus and phytophthora species, w: Forests, vol. 9, 2018, DOI:10.3390/f9080442
50. Kowalczyk Katarzyna, Sieczko Leszek, Goltsev Vasilij [i in.]: Relationship between chlorophyll fluorescence parameters and quality of the fresh and stored lettuce (Lactuca sativa L.), w: Scientia Horticulturae, vol. 235, 2018, ss. 70-77, DOI:10.1016/j.scienta.2018.02.054
51. Lotfi Ramin, Kalaji Mohamed, Valizadeh G [i in.]: Effects of humic acid on photosynthetic efficiency of rapeseed plants growing under different watering conditions, w: Photosynthetica, vol. 56, nr 3, 2018, ss. 962-970, DOI:10.1007/s11099-017-0745-9
52. Mihailova Gergana, Kocheva Konstantina, Goltsev Vasilij [i in.]: Application of a diffusion model to measure ion leakage of resurrection plant leaves undergoing desiccation, w: Plant Physiology and Biochemistry, vol. 125, 2018, ss. 185-192, DOI:10.1016/j.plaphy.2018.02.008
53. Mojski Jacek, Swoczyna Tatiana, Milecka Małgorzata [i in.]: The adaptation of a hydroponic system in vertical gardens adapted to a Polish climate, w: Inżynieria Ekologiczna, vol. 19, nr 1, 2018, ss. 96-105, DOI:10.12912/23920629/82984
54. Olechowicz Joanna, Chomontowski Chrystian, Olechowicz P [i in.]: Impact of intraspecific competition on photosynthetic apparatus efficiency in potato (Solanum tuberosum) plants, w: Photosynthetica, vol. 56, nr 3, 2018, ss. 971-975, DOI:10.1007/s11099-017-0728-x
55. Pšidová Eva, Živčák Marek, Stojnić Srđan [i in.]: Altitude of origin influences the responses of PSII photochemistry to heat waves in European beech (Fagus sylvatica L.), w: Environmental and Experimental Botany, vol. 152, 2018, ss. 97-106, DOI:10.1016/j.envexpbot.2017.12.001
56. Samborska Izabela, Kalaji Mohamed, Sieczko Leszek [i in.]: Can just one-second measurement of chlorophyll a fluorescence be used to predict sulphur deficiency in radish (Raphanus sativus

L. sativus) plants?, w: Current Plant Biology, vol. 19, 2018, ss. 1-11, Numer artykułu:100096, DOI:10.1016/j.cpb.2018.12.002
57. Samborska Izabela, Kalaji Mohamed, Sieczko Leszek [i in.]: Structural and functional disorder in the photosynthetic apparatus of radish plants under magnesium deficiency, w: Functional Plant Biology, vol. 45, nr 6, 2018, ss. 668-679, DOI:10.1071/FP17241
58. Szymański Nikodem, Burzyńska Irena, Kalaji Mohamed [i in.]: Fluorescencja chlorofilu jako narzędzie do oceny stopnia eutrofizacji ekosystemów wodnych na przykładzie stawów na obszarze gminy Raszyn, w: Inżynieria Ekologiczna, vol. 19, nr 2, 2018, ss. 73-80, DOI:10.12912/23920629/86044
59. Zabochnicka-Świątek Magdalena, Krzywonos Małgorzata, Kalaji Mohamed [i in.]: Influence of clinoptilolite on the efficiency of heavy metal removal from wastewater by Chlorella vulgaris, w: Desalination and Water Treatment, vol. 117, 2018, ss. 49-57, DOI:10.5004/dwt.2018.22034
60. Kalaji Mohamed, Goltsev Vasilij, Żuk-Gołaszewska Krystyna, Zivcak Marek, Brestic Marian: Chlorophyll fluorescence :understanding crop performance - basics and applications, 2017, CRC Press Taylor & Francis Group, ISBN 978-1-4987-6450-6, 222 s.
61. Ingle Avinash, Rathod Dnyaneshwar, Brestic Marian [i in.]: Biophysical phenotyping as an essential tool for understanding host–microbe interaction, w: Modern tools and techniques to understand microbes / Varma Ajit, Sharma Arun (red.), 2017, ISBN 978-3-319-49197-4, ss. 65-80, DOI:10.1007/978-3-319-49197-4_4
62. Cetner Magdalena, Kalaji Mohamed, Goltsev Vasilij [i in.]: Effects of nitrogen-deficiency on efficiency of light-harvesting apparatus in radish, w: Plant Physiology and Biochemistry, vol. 119, 2017, ss. 81-92, DOI:10.1016/j.plaphy.2017.08.016
63. Dąbrowski Piotr, Kalaji Mohamed, Baczewska-Dąbrowska Aneta [i in.]: Delayed chlorophyll a fluorescence, MR 820, and gas exchange changes in perennial ryegrass under salt stress, w: Journal of Luminescence, vol. 183, 2017, ss. 322-333, DOI:10.1016/j.jlumin.2016.11.031
64. Dąbrowski Piotr, Kalaji Mohamed, Keča Nenad [i in.]: The influence of phosphite treatments on oak leaves and damage caused by powdery mildew Erysiphe alphitoides, w: Folia Forestalia Polonica Series A-Forestry, vol. 59, nr 3, 2017, ss. 239-245, DOI:10.1515/ffp-2017-0025
65. Grzesik Mieczysław, Romanowska-Duda Zdzisława, Kalaji Mohamed: Effectiveness of cyanobacteria and green algae in enhancing the photosynthetic performance and growth of willow (Salix viminalis L.) plants under limited synthetic fertilizers application, w: Photosynthetica, vol. 55, nr 3, 2017, ss. 510-521, DOI:10.1007/s11099-017-0716-1
66. Helaly Mohamed, El-Hoseiny Hanan, Elsheery Nabil [i in.]: Regulation and physiological role of silicon in alleviating drought stress of mango, w: Plant Physiology and Biochemistry, vol. 118, 2017, ss. 31-44, DOI:10.1016/j.plaphy.2017.05.021
67. Kalaji Mohamed, Dąbrowski Piotr, Cetner Magdalena [i in.]: A comparison between different chlorophyll content meters under nutrient deficiency conditions, w: Journal of Plant Nutrition, vol. 40, nr 7, 2017, ss. 1024-1034, DOI:10.1080/01904167.2016.1263323
68. Kalaji Mohamed, Schansker Gert, Brestic Marian [i in.]: Erratum to: Frequently asked questions about chlorophyll fluorescence, the sequel (Photosynthesis Research, (2017), 132, 1, (13-66), 10.1007/s11120-016-0318-y), w: Photosynthesis Research, vol. 132, 2017, ss. 67-68, DOI:10.1007/s11120-017-0356-0
69. Kalaji Mohamed, Schansker Gert, Brestic Marian [i in.]: Frequently asked questions about chlorophyll fluorescence, the sequel, w: Photosynthesis Research, vol. 132, nr 1, 2017, ss. 13-66, DOI:10.1007/s11120-016-0318-y
70. Kalaji Mohamed, Rastogi Anshu: Pharmaceutical compounds: An emerging pollutant (A review on plant-pharmaceuticals interaction), w: Chiang Mai Journal of Science, vol. 44, 2017, ss. 287-297
71. Kula Monika, Kalaji Mohamed, Skoczowski Andrzej: Culture density influence on the photosynthetic efficiency of microalgae growing under different spectral compositions of light, w: Journal of Photochemistry and Photobiology B-Biology, vol. 167, 2017, ss. 290–298, DOI:10.1016/j.jphotobiol.2017.01.013

72. Mastalerczuk Grażyna, Borawska-Jarmułowicz Barbara, Kalaji Mohamed [i in.]: Gas-exchange parameters and morphological features of festulolium (Festulolium braunii K. Richert A. Camus) in response to nitrogen dosage, w: Photosynthetica, vol. 55, nr 1, 2017, ss. 20-30, DOI:10.1007/s11099-016-0665-0
73. Mastalerczuk Grażyna, Borawska-Jarmułowicz Barbara, Kalaji Mohamed: Response of Kentucky bluegrass lawn plants to drought stress at early growth stages, w: Pakistan Journal of Agricultural Sciences, vol. 54, nr 4, 2017, ss. 811-817, DOI:10.21162/PAKJAS/17.5232
74. Mastalerczuk Grażyna, Borawska-Jarmułowicz Barbara, Kalaji Mohamed [i in.]: Some physiological parameters, biomass distribution and carbon allocation in roots of forage grasses growing under different nitrogen dosages, w: Chiang Mai Journal of Science, vol. 44, nr 4, 2017, ss. 1295-1303
75. Panchal Balaji, Kalaji Mohamed: Production of Jatropha curcas L. seed oil DMC-Js-BioDs by optimized dimethyl carbonate using potassium hydroxide as catalyst, w: Journal of Alternate Energy Sources and Technologies, vol. 8, nr 2, 2017, ss. 56-63
76. Panchal Balaji, Kalaji Mohamed: Synthesis and use of a catalyst in the production of biodiesel from Pongamia pinnata seed oil with dimethyl carbonate, w: International Journal of Green Energy, vol. 14, nr 7, 2017, ss. 624-631, DOI:10.1080/15435075.2017.1313739
77. Podlaski Sławomir, Pietkiewicz Stefan, Chołuj Danuta [i in.]: The relationship between the soil water storage and water-use efficiency of seven energy crops, w: Photosynthetica, vol. 55, nr 2, 2017, ss. 210-218, DOI:10.1007/s11099-017-0697-0
78. Pogrzeba Marta, Rusinowski Szymon, Sitko Krzysztof [i in.]: Relationships between soil parameters and physiological status of Miscanthus x giganteus cultivated on soil contaminated with trace elements under NPK fertilisation vs. microbial inoculation, w: Environmental Pollution, vol. 225, 2017, ss. 163-174, DOI:10.1016/j.envpol.2017.03.058
79. Rastogi Anshu, Zivcak Marek, Sytar Oksana [i in.]: Impact of metal and metal oxide nanoparticles on plant :, w: Frontiers in Chemistry, vol. 5, 2017, ss. 1-16, DOI:10.3389/fchem.2017.00078
80. Siddiqui Manzer, Alamri Saud, Al-Khaishany Mutahhar [i in.]: Exogenous application of nitric oxide and spermidine reduces the negative effects of salt stress on tomato, w: Horticulture Environment and Biotechnology, vol. 58, nr 6, 2017, ss. 537–547, DOI:10.1007/s13580-017-0353-4
81. Sitko Krzysztof, Rusinowski Szymon, Kalaji Mohamed [i in.]: Photosynthetic efficiency as bioindicator of environmental pressure in A. halleri, w: Plant Physiology, vol. 175, nr 1, 2017, ss. 290-302, DOI:10.1104/pp.17.00212
82. Szymański Nikodem, Dąbrowski Piotr, Zabochnicka-Świątek Magdalena [i in.]: Taxonomic classification of algae by the use of chlorophyll a fluorescence, w: Przegląd Naukowy Inżynieria i Kształtowanie Środowiska, vol. 26 (4), nr 78, 2017, ss. 470-480, DOI:10.22630/PNIKS.2017.26.4.45
83. Zielonka Dariusz, Nierebiński Mariusz, Kalaji Mohamed [i in.]: Efficiency of the photosynthetic apparatus in Cannabis sativa L. fertilized with sludge froma wastewater treatment plant and with phosphogypsum, w: Ecological Questions, vol. 28, 2017, ss. 55-61, DOI:10.12775/EQ.2017.039
84. Kociel Henryk, Tuchowska Żaneta, Suchocka Marzena [i in.]: Podłoża strukturalne sposobem na poprawę kondycji drzewostanu w miastach, w: Tereny zieleni wobec zmian klimatu / Kosmala Marek (red.), 2016, Polskie Zrzeszenie Inżynierów i Techników Sanitarnych, ISBN 978-83-945245-0-0, ss. 223-228
85. Mojski Jacek, Kalaji Mohamed: Dobór gatunków roślin do ogrodu wertykalnego w rozwiązaniach zewnętrznych, w: Tereny zieleni wobec zmian klimatu / Kosmala Marek (red.), 2016, Polskie Zrzeszenie Inżynierów i Techników Sanitarnych, ISBN 978-83-945245-0-0, ss. 201-209
86. Swoczyna Tatiana, Pietkiewicz Stefan, Borowski Jacek [i in.]: Ekofizjologiczne reakcje drzew obrazowane metodą fluorescencji chlorofilu A, w: Drzewa, parki i ogrody :dziedzictwo kultury

i natury Małopolski Wschodniej : materiały VIII Zjazdu Polskiego Towarzystwa Dendrologicznego, Bolestraszyce i Lwów, 23-25 września 2016 r. / Dolatowski Jakub, Dolatowska Anna, Dudek-Klimiuk Joanna (red.), 2016, Polskie Towarzystwo Dendrologiczne, ISBN 978-83-938299-3-4, ss. 85-86

87. Bąba Wojciech, Kalaji Mohamed, Kompała-Bąba Agnieszka [i in.]: Acclimatization of photosynthetic apparatus of tor grass (Brachypodium pinnatum) during expansion, w: PLoS ONE, vol. 11, nr 6, 2016, ss. 1-27, DOI:10.1371/journal.pone.0156201
88. Bosa Karolina, Jadczuk-Tobjasz Ewa, Kalaji Mohamed: Photosynthetic productivity of pear trees grown on different rootstocks, w: Annali di Botanica, vol. 6, 2016, ss. 69-75, DOI:10.4462/annbotrm-13172
89. Cetner Magdalena, Dąbrowski Piotr, Samborska Izabela [i in.]: Zastosowanie pomiarów fluorescencji chlorofilu w badaniach środowiskowych, w: Kosmos, nr 2, 2016, ss. 197-205
90. Dąbrowski Piotr, Baczewska-Dąbrowska Aneta, Pawluśkiewicz Bogumiła [i in.]: Prompt chlorophyll a fluorescence as a rapid tool for diagnostic changes in PSII structure inhibited by salt stress in Perennial ryegrass, w: Journal of Photochemistry and Photobiology B-Biology, vol. 157, 2016, ss. 22–31, DOI:10.1016/j.jphotobiol.2016.02.001
91. Goltsev Vasilij, Kalaji Mohamed, Paunov Momchil [i in.]: Variable chlorophyll fluorescence and its use for assessing physiological condition of plant photosynthetic apparatus, w: Russian Journal of Plant Physiology, vol. 63, nr 6, 2016, ss. 869-893, DOI:10.1134/S1021443716050058
92. Górska Ewa, Stępień Wojciech, Olejniczak Izabella [i in.]: Microbial properties of soil fertilized by sewage sludge and cultivated with energy crops, w: Studia Ecologiae et Bioethicae, vol. 14, nr 3, 2016, ss. 131-142
93. Helaly Mohamed, El-Hoseiny Hanan, Elsheery Nabil [i in.]: Effect of biofertilizers and putrescine amine on the physiological features and productivity of date palm (Phoenix dactylifera, L.) grown on reclaimed-salinized soil, w: Trees-Structure and Function, vol. 30, nr 4, 2016, ss. 1149–1161, DOI:10.1007/s00468-016-1353-1
94. Janeczko Anna, Gruszka Damian, Pociecha Ewa [i in.]: Physiological and biochemical characterisation of watered and drought-stressed barley mutants in the HvDWARF gene encoding C6-oxidase involved in brassinosteroid biosynthesis, w: Plant Physiology and Biochemistry, vol. 99, 2016, ss. 126–141, DOI:10.1016/j.plaphy.2015.12.003
95. Kalaji Mohamed, Jajoo Anjana, Oukarroum Abdallah [i in.]: Chlorophyll a fluorescence as a tool to monitor physiological status of plants under abiotic stress conditions, w: Acta Physiologiae Plantarum, vol. 38, nr 4, 2016, ss. 1-11, DOI:10.1007/s11738-016-2113-y
96. Kalaji Mohamed, Cetner Magdalena, Samborska Izabela [i in.]: Effective microorganisms impact on photosynthetic activity of Arabidopsis plant grown under salinity stress conditions, w: Annals of Warsaw University of Life Sciences-SGGW Land Reclamation, nr 48 (2), 2016, ss. 153-163
97. Kalaji Mohamed, Sytar Oksana, Brestic Marian [i in.]: Risk assessment of urban lake water quality based on in-situ cyanobacterial and total chlorophyll-a monitoring, w: Polish Journal of Environmental Studies, vol. 25, nr 2, 2016, ss. 655-661, DOI:10.15244/pjoes/60895
98. Kowalczyk Katarzyna, Gajc-Wolska Janina, Niedzińska Monika [i in.]: Response of growth, quality parameters and photosynthetic apparatus of endive plant to different culture media, w: Folia Horticulturae, vol. 28, nr 1, 2016, ss. 25-30, DOI:10.1515/fhort-2016-0004
99. Mathur S, Kalaji Mohamed, Jajoo Anjana: Investigation of deleterious effects of chromium phytotoxicity and photosynthesis in wheat plant, w: Photosynthetica, vol. 54, nr 2, 2016, ss. 185-192, DOI:10.1007/s11099-016-0198-6
100. Mazur Radosław, Sadowska Monika, Kowalewska Łucja [i in.]: Overlapping toxic effect of long term thallium exposure on white mustard (Sinapis alba L.) photosynthetic activity, w: BMC Plant Biology, vol. 16, nr 191, 2016, DOI:10.1186/s12870-016-0883-4
101. Osman Gamal H., Assem Shireen K., Alreedy Rasha M. [i in.] : Erratum: Development of insect resistant maize plants expressing a chitinase gene from the cotton leaf worm,

Spodoptera littoralis (Scientific Reports (2016) 5 (18067) DOI 10.1038/srep18067), w: Scientific Reports, vol. 6, 2016, DOI:10.1038/srep20449
102. Brestic Marian, Zivcak Marek, Kunderlikova Kristyna [i in.] : Low PSI content limits the photoprotection of PSI and PSII in early growth stages of chlorophyll b-deficient wheat mutant lines, w: Photosynthesis Research, vol. 125, nr 1, 2015, ss. 151-166, DOI:10.1007/s11120-015-0093-1
103. Dąbrowski Piotr, Pawluśkiewicz Bogumiła, Baczewska-Dąbrowska Aneta [i in.] : Chlorophyll a fluorescence of perennial ryegrass (Lolium perenne L.) varieties under long term exposure to shade, w: Zemdirbyste-Agriculture, vol. 102, nr 3, 2015, ss. 305-312, DOI:10.13080/z-a.2015.102.039
104. Dąbrowski Piotr, Pawluśkiewicz Bogumiła, Baczewska-Dąbrowska Aneta [i in.] : Evaluation the vigour of urban green lawn grown under long-term shade conditions by the use of chlorophyll fluorescence technique, w: Annals of Warsaw University of Life Sciences-SGGW Land Reclamation, nr 47 (3), 2015, ss. 203-210
105. Dąbrowski Piotr, Cetner Magdalena, Samborska Izabela [i in.] : Measuring light spectrum as a main indicator of artificial sourc es quality, w: Journal of Coastal Life Medicine, vol. 3, nr 5, 2015, ss. 398-404, DOI:10.12980/JCLM.3.2015J5-25
106. Dimitrova Stella, Dankov Kolyo, Paunov Momchil [i in.] : Dark drops of prompt chlorophyll fluorescence as a novel approach for evaluation of the photosynthetic machinery state, w: Journal of BioScience and Biotechnology, vol. 4, 2015, ss. 103-113
107. Górska Ewa, Dobrzyński Jakub, Jankiewicz Urszula [i in.] : Degradation and colonization of cellulose by diazotrophic strains of Paenibacillus polymyxa isolated from soil, w: Journal of Bioremediation & Biodegradation, vol. 6, nr 2, 2015, DOI:10.4172/2155-6199.1000271
108. Koprowski Marcin, Robertson Iain, Wils Tommy [i in.] : The application of potato starch effluent causes a reduction in the photosynthetic efficiency and growth of Scots pine (Pinus sylvestris L.), w: Trees-Structure and Function, vol. 29, nr 5, 2015, ss. 1471-1481, DOI:10.1007/s00468-015-1228-x
109. Osman Gamal, Assem Shireen, Alreedy Rasha [i in.] : Development of insect resistant maize plants expressing a chitinase gene from the cotton leaf worm, Spodoptera littoralis, w: Scientific Reports, vol. 5, 2015, ss. 1-11, DOI:10.1038/srep18067
110. Oukarroum Abdallah, Bussotti Filippo, Goltsev Vasilij [i in.] : Correlation between reactive oxygen species production and photochemistry of photosystems I and II in Lemna gibba L. plants under salt stress, w: Environmental and Experimental Botany, vol. 109, 2015, ss. 80-88, DOI:10.1016/j.envexpbot.2014.08.005
111. Paunov Momchil, Dankov Kolyo, Dimitrova Stella [i in.] : Effect of water stress on photosynthetic light phase in leaves of two ecotypes of Platanus orientalis L. plants, w: Journal of BioScience and Biotechnology, vol. 4, 2015, ss. 15-23
112. Rapacz Marcin, Sasin Monika, Kalaji Mohamed [i in.] : Is the OJIP test a reliable indicator of winter hardiness and freezing tolerance of common wheat and triticale under variable winter environments?, w: PLoS ONE, vol. 10, nr 7, 2015, DOI:10.1371/journal.pone.0134820
113. Swoczyna Tatiana, Kalaji Mohamed, Pietkiewicz Stefan [i in.] : Ability of various tree species to acclimation in urban environments probed with the JIP-test, w: Urban Forestry and Urban Greening, vol. 14, nr 3, 2015, ss. 544-553, DOI:10.1016/j.ufug.2015.05.005
114. Goltsev Vasilij, Kalaji Mohamed, Kouzmanova Margarita, Allakhverdiev Suleyman: Variable and delayed chlorophyll a fluorescence – basics and application in plant sciences, 2014, Institute of Computer Sciences, ISBN 978-5-4344-0180-7, 220 s.
115. Brestic Marian, Zivcak Marek, Olsovska Katarina [i in.] : Heat signaling and stress responses in photosynthesis, w: Plant signaling :understanding the molecular crosstalk / Hakeem Khalid, Rehman Reiaz, Tahir Inayatullah (red.), 2014, Springer India, ISBN 978-81-322-1542-4 online, ss. 241-256, DOI:10.1007/978-81-322-1542-4_12

116. Kalaji Mohamed, Goltsev Vasilij, Brestic Marian [i in.] : In vivo measurements of light emission in plants, w: Sovremennye problemy fotosinteza :meždisciplinarnye voprosy biologii, matematiki, fiziki, himii i mediciny, vol. T. 1, 2014, ISBN 978-5-4344-0182-1, ss. 1-40
117. Kalaji Mohamed, Jajoo Anjana, Oukarroum Abdallah [i in.] : The use of chlorophyll fluorescence kinetics analysis to study the performance of photosynthetic machinery in plants, w: Emerging technologies and management of crop stress tolerance :a sustainable approach / Ahmad Parvaiz, Rasool Saiema (red.), vol. Vol. 2, 2014, Academic Press, ISBN 978-0-12-800875-1, ss. 347-384, DOI:10.1016/B978-0-12-800875-1.00015-6
118. Swoczyna Tatiana, Borowski Jacek, Pietkiewicz Stefan [i in.] : Growth and physiological performance of young urban trees of eight taxa in Warsaw, w: Plants in urban areas and landscape 2014 :proceedings of the scientific papers., 2014, ISBN 978-80-552-1262-3, ss. 15-19, DOI:10.15414/2014.9788055212623.15-19
119. Aleksandrov Valdimir, Krasteva Vassilena, Paunov Momchil [i in.] : Deficiency of some nutrient elements in bean and maize plants analyzed by luminescent method, w: Bulgarian Journal of Agricultural Science, vol. 20, 2014, ss. 24-30
120. Borawska-Jarmułowicz Barbara, Mastalerczuk Grażyna, Pietkiewicz Stefan [i in.] : Low temperature and hardening effects on photosynthetic apparatus efficiency and survival of forage grass varieties, w: Plant Soil and Environment, vol. 60, nr 4, 2014, ss. 177-183
121. Borawska-Jarmułowicz Barbara, Mastalerczuk Grażyna, Kalaji Mohamed [i in.] : Photosynthetic efficiency and survival of Dactylis glomerata and Lolium perenne following low temperature stress, w: Russian Journal of Plant Physiology, vol. 61, nr 3, 2014, ss. 281-288, DOI:10.1134/S1021443714030029
122. Bosa Karolina, Jadczuk-Tobjasz Ewa, Kalaji Mohamed [i in.] : Evaluating the effect of rootstocks and potassium level on photosynthetic productivity and yield of pear trees, w: Fiziologiâ Rastenij, vol. 61, nr 2, 2014, ss. 251-257, DOI:10.7868/S001533031402002X
123. Brestic Marian, Zivcak Marek, Olsovska Katarina [i in.] : Reduced glutamine synthetase activity plays a role in control of photosynthetic responses to high light in barley leaves, w: Plant Physiology and Biochemistry, vol. 81, 2014, ss. 74–83, DOI:10.1016/j.plaphy.2014.01.002
124. Cetner Magdalena, Pietkiewicz Stefan, Podlaski Sławomir [i in.] : Photosynthetic efficiency of virginia mallow (Sida Hermaphrodita (L.) Rusby) under differentiated soil moisture conditions, w: International Journal of Sustainable Water and Environmental Systems, vol. 6, nr 2, 2014, ss. 89-95, DOI:10.5383/swes.06.02.010
125. Kalaji Mohamed, Schansker Gert, Ladle Richard [i in.] : Frequently asked questions about in vivo chlorophyll fluorescence: practical issues, w: Photosynthesis Research, vol. 122, nr 2, 2014, ss. 121-158, DOI:10.1007/s11120-014-0024-6
126. Kalaji Mohamed, Oukarroum Abdallah, Alexandrov Vladimir [i in.] : Identification of nutrient deficiency in maize and tomato plants by in vivo chlorophyll a fluorescence measurements, w: Plant Physiology and Biochemistry, vol. 81, 2014, ss. 16-25, DOI:10.1016/j.plaphy.2014.03.029
127. Pietkiewicz Stefan, Dratkiewicz Piotr, Horaczek Tomasz [i in.] : Evaluation of post hydrothermal stress activity on photosynthetic apparatus and yield in miscanthus cultivated under static Fertilizer Experimen tal Conditions, w: International Journal of Sustainable Water and Environmental Systems, vol. 6, nr 2, 2014, ss. 73-79, DOI:10.5383/swes.06.02.0008
128. Samborska Izabela, Alexandrov Vladimir, Sieczko Leszek [i in.] : Artificial neural networks and their application in biological and agricultural research, w: Signpost Open Access Journal of NanoPhotoBioSciences, vol. 2, 2014, ss. 14-30
129. Shaw Arun, Ghosh Supriya, Kalaji Mohamed [i in.] : Nano-CuO stress induced modulation of antioxidative defense and photosynthetic performance of Syrian barley (Hordeum vulgare L.), w: Environmental and Experimental Botany, vol. 102, 2014, ss. 37-47, DOI:10.1016/j.envexpbot.2014.02.016

130. Stępień Wojciech, Górska Ewa, Pietkiewicz Stefan [i in.] : Long-term mineral fertilization impact on chemical and microbiological properties of soil and Miscanthus × giganteus yield, w: Plant Soil and Environment, vol. 60, nr 3, 2014, ss. 117-122
131. Zivcak Marek, Olsovska Katarina, Slamka Pavol [i in.] : Measurements of chlorophyll fluorescence in different leaf positions may detect nitrogen deficiency in wheat, w: Zemdirbyste-Agriculture, vol. 101, nr 4, 2014, ss. 437-444, DOI:10.13080/z-a.2014.101.056
132. Zivcak Marek, Kalaji Mohamed, Shao Hong-Bo [i in.] : Photosynthetic proton and electron transport in wheat leaves under prolonged moderate drought stress, w: Journal of Photochemistry and Photobiology B-Biology, vol. 137, 2014, ss. 107-115, DOI:10.1016/j.jphotobiol.2014.01.007
133. Zivcak Marek, Brestic Marian, Kalaji Mohamed [i in.] : Photosynthetic responses of sun- and shade-grown barley leaves to high light: is the lower PSII connectivity in shade leaves associated with protection against excess of light?, w: Photosynthesis Research, vol. 119, nr 3, 2014, ss. 339-354, DOI:10.1007/s11120-014-9969-8
134. Bosa Karolina, Jadczuk-Tobjasz Ewa, Kalaji Mohamed: Zastosowanie fluorescencji chlorofilu jako bezinwazyjnej metody do oceny stanu odżywienia drzew gruszy, w: Czynniki wpływające na plonowanie i jakość owoców roślin sadowniczych :Wilanów, 1 września 2013 r., 2013, Horttpress, ss. 57-65
135. Kalaji Mohamed, Govindjee. , Bosa Karolina [i in.] : Effects of salt stress on photosystem II efficiency and CO_2 assimilation in two Syrian barley landraces, w: Photosynthesis Research for Food, Fuel and the Future :15th International Conference on Photosynthesis / Kuang Tingyun, Lu Congming, Zhang Lixin (red.), Advanced Topics in Science and Technology in China, 2013, Springer Berlin Heidelberg, ISBN 978-3-642-32034-7 online, ss. 768-772, DOI:10.1007/978-3-642-32034-7_164
136. Akhkha Abdellah, Boutraa Tahar, Kalaji Mohamed [i in.] : Chlorophyll fluorescence: a potential selection criterion for drought tolerance in selected durum wheat (Triticum durum Desf.) cultivars, w: Signpost Open Access Journal of NanoPhotoBioSciences, vol. 1, 2013, ss. 147-15
137. Dąbrowski Piotr, Pawluśkiewicz Bogumiła, Kalaji Mohamed [i in.] : The effect of light availability on leaf area index, biomass production and plant species composition of park grasslands in Warsaw, w: Plant Soil and Environment, vol. 59, nr 12, 2013, ss. 543-548
138. Omar Samar, Elsheery Nabil, Kalaji Mohamed [i in.] : Identification and differential expression of two dehydrin cDNAs during maturation of Jatropha curcas seeds, w: Biochemistry-Moscow+, vol. 78, nr 5, 2013, ss. 485-495
139. Omar Samar A., Elsheery Nabil I., Kalaji Mohamed [i in.] : Erratum to: Dehydroascorbate reductase and glutathione reductase play an important role in scavenging hydrogen peroxide during natural and artificial dehydration of Jatropha curcas seeds (55, (469)), w: Journal of Plant Biology, vol. 56, 2013, ss. 266-266, DOI:10.1007/s12374-013-0911-y
140. Saxena Dinesh, Hooda Peter, Singh Shivom [i in.] : An assessment of atmospheric metal deposition in Garhwal Hills, India by moss Rhodobryum giganteum (Schwaegr.) Par, w: Geophytology, vol. 43, nr 1, 2013, ss. 17-28
141. Zivcak Marek, Brestic Marian, Balatova Zuzana [i in.] : Photosynthetic electron transport and specific photoprotective responses in wheat leaves under drought stress, w: Photosynthesis Research, vol. 117, nr 1/3, 2013, ss. 529-546
142. Bussotti Filippo, Kalaji Mohamed, Desotgiu Rosanna, Pollastrini Martina, Łoboda Tadeusz, Bosa Karolina: Misurare la vitalità delle piante per mezzo della fluorescenza della clorofilla, 2012, Firenze University Press, 130 s.
143. Bosa Karolina, Jadczuk-Tobjasz Ewa, Kalaji Mohamed [i in.] : Wydajność aparatu fotosyntetycznego oraz produktywność gruszy odmiany "Konferencja" w zróżnicowanych warunkach nawadniania i zaopatrzenia w potas, w: Czynniki wpływające na plonowanie i jakość owoców roślin sadowniczych :Wilanów, 2 września 2012 r., 2012, Hortpress, ss. 35-46

144. Augustynowicz Janusz, Pietkiewicz Stefan, Kalaji Mohamed [i in.] : Wpływ nawożenia osadem ściekowym na ogólną liczbę bakterii i grzybów w glebie oraz wydajności aparatu fotosyntetycznego Sida hermaphrodita (L.) Rusby, w: Ekologia i Technika, nr 3/1, 2012, ss. 27-33
145. Augustynowicz Janusz, Pietkiewicz Stefan, Kalaji Mohamed [i in.] : Wpływ nawożenia osadem ściekowym na wskaźniki maksymalnej wydajności kwantowej i funkcjonowania fotoukładu II słonecznika bulwiastego Helianthus tuberosus L, w: Ekologia i Technika, nr 3/1, 2012, ss. 40-46
146. Brestic Marian, Zivcak Marek, Kalaji Mohamed [i in.] : Photosystem II thermostability in situ: Environmentally induced acclimation and genotype-specific reactions in Triticum aestivum L, w: Plant Physiology and Biochemistry, vol. 57, 2012, ss. 93-105
147. Goltsev Vasilij, Zaharieva Ivelina, Chernev Petko [i in.] : Drought-induced modifications of photosynthetic electron transport in intact leaves: Analysis and use of neural networks as a tool for a rapid non-invasive estimation, w: Biochimica et Biophysica Acta - Bioenergetics, vol. 1817, nr 8, 2012, ss. 1490-1498
148. Kalaji Mohamed, Goltsev Vasilij, Bosa Karolina [i in.] : Experimental in vivo measurements of light emission in plants: a perspective dedicated to David Walker, w: Photosynthesis Research, vol. 114, nr 2, 2012, ss. 69-96
149. Kalaji Mohamed, Carpentier Robert, Allakhverdiev Suleyman [i in.] : Fluorescence parameters as early indicators of light stress in barley, w: Journal of Photochemistry and Photobiology B-Biology, vol. 112, 2012, ss. 1-6
150. Omar Samar, Elsheery Nabil, Kalaji Mohamed [i in.] : Dehydroascorbate reductase and glutathione reductase play an important role in scavenging hydrogen peroxide during natural and artificial dehydration of Jatropha curcas seeds, w: Journal of Plant Biology, vol. 55, nr 6, 2012, ss. 469-480
151. Kalaji Mohamed: Oddziaływanie abiotycznych czynników stresowych na fluorescencję chlorofilu w roślinach wybranych odmian jęczmienia Hordeum vulgare L., Rozprawy Naukowe i Monografie - Szkoła Główna Gospodarstwa Wiejskiego, 2011, Wydawnictwo SGGW, 176 s.
152. Bosa Karolina, Kalaji Mohamed: Fluorescencja chlorofilu - metoda przewidywania stresu oraz oceny wielkości i jakości plonu, w: Czynniki wpływające na plonowanie i jakość owoców roślin sadowniczych :Wilanów, 4 września 2011 r., 2011, Hortpress, ss. 81-95
153. Kalaji Mohamed, Bosa Karolina, Kościelniak Janusz [i in.] : Chlorophyll a fluorescence - a useful tool for the early detection of temperature stress in spring barley (Hordeum vulgare L.), w: OMICS-A Journal of Integrative Biology, vol. 15, nr 12, 2011, ss. 925-934
154. Kalaji Mohamed, Govindjee , Bosa Karolina [i in.] : Effects of salt stress on photosystem II efficiency and CO 2 assimilation of two Syrian barley landraces, w: Environmental and Experimental Botany, vol. 73, 2011, ss. 64-72, DOI:10.1016/j.envexpbot.2010.10.009
155. Kalaji Mohamed, Govindjee. , Bosa Karolina [i in.] : Effects of salt stress on photosystem II efficiency and CO2 assimilation of two Syrian barley landraces, w: Environmental and Experimental Botany, vol. 73, 2011, ss. 64-72
156. Kościelniak Janusz, Ostrowska Agnieszka, Biesaga-Kościelniak Jolanta [i in.] : The effect of zearalenone on PSII photochemical activity and growth in wheat and soybean under salt (NaCl) stress, w: Acta Physiologiae Plantarum, vol. 33, nr 6, 2011, ss. 2329-2338
157. Kalaji Mohamed, Łoboda Tadeusz: Fluorescencja chlorofilu w badaniach stanu fizjologicznego roślin, 2010, Wydawnictwo SGGW, 116 s.
158. Borawska-Jarmułowicz Barbara, Mastalerczuk Grażyna, Kalaji Mohamed: Response of Dactylis glomerata to low temperature stress, w: Grassland in a changing world :proceedings of the 23th General Meeting of the European Grassland Federation : Kiel, Germany, August 29th - September 2nd 2010 / Schnyder Hans (red.), Grassland Science in Europe, 2010, Mecke-Druck u. Verlag, ss. 359-361
159. Augustynowicz Janusz, Pietkiewicz Stefan, Kalaji Mohamed [i in.] : Wpływ nawożenia osadem ściekowym na wybrane parametry aktywności biologicznej gleby oraz wydajności

aparatu fotosyntetycznego słonecznika bulwiastego (Helianthus tuberosus L.), w: Woda - Środowisko - Obszary Wiejskie, 2010, ss. 7-18
160. Augustynowicz Janusz, Pietkiewicz Stefan, Kalaji Mohamed [i in.] : Wpływ nawożenia osadem ściekowym na wybrane parametry biologii gleby oraz wydajności aparatu fotosyntetycznego ślazowca pensylwańskiego (Sida hermaphrodita (L.) Rusby), w: Nauka Przyroda Technologie, 2010, ss. 1-11
161. Kalaji Mohamed, Bosa Karolina, Oszako Tomasz: Drzewa leśne - aklimatyzacja do stresów środowiskowych, w: Głos Lasu, nr 4, 2010, ss. 19-20
162. Kalaji Mohamed, Bosa Karolina, Grochowska Agnieszka: ŝČirica (Amaranthus SPP.) - "zerno" XXI veka, w: Zerno, nr 6, 2010, ss. 14-21
163. Kalaji Mohamed, Rutkowska Agnieszka: Stress ot soli :, w: Zerno, nr 1, 2010, ss. 76-82
164. Romanowska-Duda Zdzisława, Grzesik Mieczysław, Kalaji Mohamed: Phytotoxkit test in growth assessment of corn as an energy plant fertilized with sewage sludge, w: Environment Protection Engineering, vol. 36, nr 1, 2010, ss. 10, Vol. 36, nr 1, 73-81
165. Swoczyna Tatiana, Kalaji Mohamed, Pietkiewicz Stefan [i in.] : Monitoring young urban trees tolerance to roadside conditions by application of the chlorophyll fluorescence technique, w: Zeszyty Problemowe Postępów Nauk Rolniczych, 2010, ss. 303-309
166. Swoczyna Tatiana, Kalaji Mohamed, Pietkiewicz Stefan [i in.] : Photosynthetic apparatus efficiency of eight tree taxa as an indicator of their tolerance to urban environments, w: Dendrobiology, vol. 63, 2010, ss. 65-75
167. Tuba Zoltan, Saxena Dinesh, Srivastava Kajal [i in.] : Chlorophyll a fluorescence measurements for validating the tolerant bryophytes for heavy metal (Pb) biomapping, w: Current Science, vol. 98, nr 11, 2010, ss. 1505-1508
168. Kalaji Mohamed, Łoboda Tadeusz: Fluorescencja chlorofilu w badaniach stanu fizjologicznego roślin, 2009, Wydawnictwo SGGW, 117 s.
169. Augustynowicz Janusz, Pietkiewicz Stefan, Kalaji Mohamed [i in.] : The effect of sludge fertilization on choosen parameters of chlorophyll fluorescence and biomass yield of Jerusalem artichoke (Helianthus tuberosus L.), w: Sewages and waste materials in environment :monograph / Sądej Wiera (red.), 2009, Department of Land Reclamation and Environmental Management. University of Warmia and Mazury, ss. 129-139
170. Augustynowicz Janusz, Pietkiewicz Stefan, Kalaji Mohamed [i in.] : Wpływ Efektywnych Mikroorganizmów na wybrane parametry fizjologiczne roślin Polygonum sachalinense nawożonych osadem ściekowym, w: Wielokierunkowość badań w rolnictwie i leśnictwie :monografia 2009 / Wiśniowska-Kielian Barbara (red.), vol. T. 1, 2009, Wydawnictwo Uniwersytetu Rolniczego, ss. 167-174
171. Abukhovich Aliaksandr, Pietkiewicz Stefan, Karwowska Romualda [i in.] : Canopy architecture and yielding of different tomato morphotypes under glasshouse conditions, w: Vegetable Crops Research Bulletin, vol. 70, 2009, ss. 49-58
172. Kalaji Mohamed: Dva tipa priborov dlâ mgnovennogo analiza sostoâniâ rasteniâ fluorescenciâ hlorofilla: poleznyj (praktičnyj) instrument, w: Zerno, nr 11, 2009, ss. 66-70
173. Kalaji Mohamed: Neprognoziruemyj stress protiv agronomičeskoj stabil'nosti, w: Zerno, nr 10, 2009, ss. 74-78
174. Kościelniak Janusz, Biesaga-Kościelniak Jolanta, Janeczko Anna [i in.] : Can the Giberella zeae toxin zearalenone affect the photosynthetic productivity and increase yield formation in spring wheat and soybean plants?, w: Photosynthetica, vol. 47, nr 4, 2009, ss. 586-594
175. Latocha Piotr, Ciechocińska Magdalena, Pietkiewicz Stefan [i in.] : Preliminary assessment of antiranspirant Vapor Gard influence on Actinidia arguta growing under drought stress conditions, w: Annals of Warsaw University of Life Sciences - SGGW. Horticulture and Landscape Architecture, nr 30, 2009, ss. 149-159
176. Oszako Tomasz, Kalaji Mohamed, Gąszczyk Katarzyna [i in.] : Alternatywne metody ochrony sadzonek w szkółkach, w: Notatnik Naukowy Instytutu Badawczego Leśnictwa, 2009, ss. 09, nr 7

177. Augustynowicz Janusz, Pietkiewicz Stefan, Kalaji Mohamed [i in.] : Wpływ preparatów EM na wybrane parametry fizjologiczne i produkcję biomasy przez rośliny energetyczne na przykładzie słonecznika bulwiastego (topinambura), w: Wielokierunkowość badań w rolnictwie i leśnictwie :monografia 2008. / Wiśniowska-Kielian Barbara (red.), vol. T. 2, 2008, Wydawnictwo Uniwersytetu Rolniczego, ss. 9-23
178. Kalaji Mohamed, Guo Peiguo: Chlorophyll fluorescence: a useful tool in barley plant breeding programs, w: Photochemistry research progress / ed. Alejandro Sánchez, 2008, ss. 439-463
179. Augustynowicz Janusz, Pietkiewicz Stefan, Kalaji Mohamed [i in.] : Wpływ preparatów EM na wybrane parametry fizjologiczne roślin energetycznych nawożonych osadem ściekowym na przykładzie ślazowca pensylwańskiego (Sida hermaphrodita (L.) Rusby), w: Ekologia i Technika, nr 5A, 2008, ss. 11-19
180. Kalaji Mohamed, Pietkiewicz Stefan, Grzesiak Stanisław: Wspomnienie o Profesorze Emilu Nalborczyku (1932-2006), w: Zeszyty Problemowe Postępów Nauk Rolniczych, 2008, ss. 15-1
181. Rykaczewska Krystyna, Pietkiewicz Stefan, Kalaji Mohamed: The effect of weather conditions during the growing period on potato plant development and chlorophyll a fluorescence activity, w: Italian Journal of Agronomy, vol. 3, 2008, ss. 815-816
182. Rykaczewska Krystyna, Pietkiewicz Stefan, Kalaji Mohamed: The effect of weather conditions during the growing period on potato plant development and chlorophyll α fluorescence activity, w: Italian Journal of Agronomy, nr 3 suppl., 2008, ss. 815-816
183. Kalaji Mohamed, Łoboda Tadeusz: Photosystem II of barley seedlings under cadmium and lead stress, w: Plant Soil and Environment, vol. 53, nr 12, 2007, ss. 511-516
184. Rykaczewska Krystyna, Kalaji Mohamed, Pietkiewicz Stefan: Use of chlorophyll a fluorescence technique to evaluate the spring chill stress of potato cultivars, w: Bibliotheca Fragmenta Agronomica, vol. 11, 2006, ss. 217-218
185. Chołuj Danuta, Kalaji Mohamed, Niemyska B.: Analysis of the gas exchange components in chilled tomato plants, w: Photosynthetica, vol. 34, 1998, ss. 583-589, DOI:10.1023/A:1006825915953
186. Kalaji Mohamed, Pietkiewicz Stefan: Salinity effects on plant growth and other physiological processes, w: Acta Physiologiae Plantarum, vol. 15, 1993, ss. 89-124

PARTICIPATION IN GRANTS AND PROJECTS

• Grant contractor NCN No. 2675 / B / P01 / 2011/40 "Development of a method for assessing the efficiency of water use by monocotyledonous crops by measuring chlorophyll fluorescence and gas exchange", 2011-2014.

• MNiSW grant contract No. N R12 0098 10 "The use of phosphites as resistance elicitors for root pathogens in forest nurseries and stands", 2010-2013.

• Project contractor KSI-POKL.04.01.01.-00-232 / 08-0 "Program for modernizing education in WULS-SGGW to ensure competitiveness and high competence of graduates", financed under the Human Capital Operational Program (POKL) and co-financed from the European Fund Social, 2009-2013

• IHAR-PIB Project Contractor no. 4-3-00-3-03 "Determination of physiological indicators of tuberization and yielding of potato plants using classic growth analysis and using modern control and measurement equipment for their use in breeding", 2003-2007.

• The contractor of the KBN instrument grant "Supplementing the scientific and research apparatus for the Department of Plant Physiology with control and measurement devices for the study of crop response to stress", 2000-2001.

• Grant contractor 5P06B02515 "The use of photosynthetic active radiation for the production of traditional and semi-wood biomass for winter forms of triticale, wheat and rye", 1999-2004.

• Organizing and launching a tissue culture workshop at the Department of Plant Physiology, Faculty of Agriculture, WULS-SGGW. 1994. within the framework of the university grant, technical works related to the creation of a tissue culture workshop were designed and made, and the necessary apparatus was purchased and launched. The laboratory was used for the in vitro production of Miscantus gigantus seedlings, mini potato tubers and for didactic purposes (specialty: Plant biotechnology).

• Deputy head of the scientific and research topic "Determination of physiological indicators of tuberisation and yielding of potato plants using modern control and measurement equipment". The order of the Ministry of Agriculture and Rural Development 2002-2007.

• Research contractor in the BIOSTRATEG2 / 296369/5 / NCBR / 2016 project; PBOSPBC: "Processing of waste biomass in combined biological and chemical processes" (Task 6 in the evaluation of chlorophyll fluorescence in microalgae cultures), 2016-2019. Total value of the project: PLN 29 591 845.

• Project coordinator no. POIR.01.01.01-20-1911 / 15 titled: "Triffid - a product of the future of the Metalworking Cluster (KKK). White Hill synergy of cooperation in the R & D area of the "Intelligent Development Operational Program, Priority Axis: Support for conducting R & D works by enterprises. Activities: R & D projects of enterprises, 2016-2020. Total value of the project: PLN 8,744,817.80.

• Manger of mini grant INCUBATOR, titled: "iPlant - remote system of physiological monitoring of plants" (2018) Total value of the mini project: PLN 55 000. The Mini Grant is implemented as part of the Innovation + Incubator program awarded to the Warsaw University of Life Sciences (Leader) and Hugo Agricultural University Kołłątaja in Krakow (Partner) The grant is implemented as part of the system project Supporting the management of scientific research and commercialization of R & D results in scientific units and enterprises, implemented under the Intelligent Development Operational Program 2014-2020.The total value of the project: PLN 2,200,000 .

• NCBR grant coordinator "The saving of water resources and improvement of air quality through the use of retention rainwater" in and the edition of the strategic program for scientific research and development "Natural environment, agriculture and forestry" - BIOSTRATEG, 2014-2017 - ID: 270606 (no agreement has yet been signed with NCBR for administrative reasons, despite a positive evaluation of the grant and granting financial resources - NCBR Decision No. DZP / BIOSTRATEG-I / 2489). Total value of the project: PLN 20,321,015.

COOPERATION WITH UNIVERSITIES, SCIENTIFIC INSTITUTES AND RESEARCH CENTERS

• Agroecological University, Zhytomyr, Ukraine

• Institute of Natural Resources and Environmental Research / Kacst Herbarium, King Abdulaziz City for Science and Technology, Riyadh, Saudi Arabia

• Department of Biology, Faculty of Natural Sciences, University of Hacettepe, Ankara, Turkey

• Department of Plant Physiology, Slovak Agricultural University, Nitra, Slovakia

• Bioenergetics Laboratory, University of Geneva, Geneva, Switzerland

• ICARDA (International Center for Agricultural Research in Dry Areas), Aleppo, Syria

• Botany Department, Bareilly College, Bareilly, India

• Faculty of Agricultural Biotechnology, Florence, Italy

• Department of Agriculture, USAMV, Cluj-Napoca, Romania

• Universidade de Aveiro, CESAM Center for Environmental and Marine Studies, Portugal

• Environmental Institute of Scientific Networks EISN-INSTITUTE, Germany

• Faculty of Agriculture, Tanta University, Egypt

• Institute of Biological and Health Sciences, Federal University of Alagoas, Brazil

• Institute of Plant Physiology, Russian Academy of Sciences, Moscow, Russia

• Institute of Fundamental Biological Problems, Russian Academy of Sciences, Pushchino, Moscow Region, Russia

• Department of Biophysics and Radiobiology, Faculty of Biology, St. Kliment Ohridski University of Sofia, Bulgaria

• Horticultural Department, Instituto Valenciano de Investigaciones Agrarias, Valencia, Spain

• Department of Agriculture, Food and Environment Via del Borghetto, Pisa, Italy

• Plant Lighting BV, Bunnik, the Netherlands

• School of Life Sciences, Devi Ahilya University, Indore, India

• Faculty of Life Sciences and Biotechnology, University of Ferrara, Ferrara, Italy

• Center for Life Sciences, Central University of Jharkhand, Ranchi, India

• Department of Plant Production, Universitat Polite`cnica de Vale`ncia, Valencia, Spain

• Department of Biology, CESAM - Centro de Estudos to Ambiente e do Mar, Universidade de Aveiro, Aveiro, Portugal

• Research Board for Palm Oil, Andhra Pradesh, India

• Department of Biology, Roanoke College, Salem, USA

• Institute of Plant Physiology, INFIVE (Universidad Nacional de La Plata - Consejo Nacional de Investigaciones Cientı'ficas y Te'cnicas), La Plata, Argentina

• Faculty of Plant Biology, University of Illinois, Urbana-Champaign, USA

• Faculty of Chemistry and Biochemistry, University of Quebec, Montreal, Canada

• Institute of Plant Biology, Biological Research Center of the Hungarian Academy of Sciences, Szeged, Hungary

COOPERATION WITH THE SOCIAL AND ECONOMIC ENVIRONMENTS/SECTORS

• Scientific representation - role: research and development research towards the creation and improvement of scientific and research portable and computerized instruments/devices to be used in the field of plant biology and physiology (development of prototypes and technical assistance) in the following companies:

- Hansatech Instruments Ltd, Narborough Road, Pentney, King's Lynn, Norfolk PE32 1JL, United Kingdom
- bbe Moldaenke GmbH, Preetzer Chaussee 177, 24222 Schwentinental, GERMANY
- FORCE-A, Université Paris Sud - Bâtiment 503, Rue du Belvédère, 91893 ORSAY CEDEX, France
- Skye Instruments Ltd, 21 Ddole Enterprise Park, Llandrindod Wells, Powys, LD1 6DF, United Kingdom
- PP Systems International, Inc. 110 Haverhill Road, Suite 301, Amesbury, MA 01913 USA
- Green Architecture Company (Poland). Monitoring of the physiological condition of the grass at the National Stadium in Warsaw, by measuring the fluorescence of chlorophyll. Preparation for the European Football Championship 2012 (EURO 2012).
- Avgust Crop Protection Company (Ukraine). Monitoring the physiological state of plants by measuring chlorophyll fluorescence.
- COOLEX Libner Company - Brzostowski Company (Poland). Monitoring the physiological status of fruit by means of chlorophyll fluorescence measurement (SGGW experimental field in Wilanów, Warsaw).
- AB System Company (Poland). Monitoring the physiological state of vertical garden plants by measuring the chlorophyll fluorescence.
- Headwall company (Poland). Monitoring the physiological status of plants using drone.
- Fly & Watch Company (Poland). Monitoring the physiological status of plants using drone.
- Bobus Lab. Sp. z o.o. Company, Pacanowice (Poland). Bionic greenhouse - standardization of plant lighting processes in crops under cover, taking into account the plant's demand for mineral components, H_2O and CO_2.
- "Lafoge" Company Wiesław Kształoń (Poland). Modern development of lighting in greenhouses based on the measurement of chlorophyll fluorescence.
- Norbert Kochanowski company. " Development of a biofeedback system for quality control and light intensity optimal for plants.

- Clean World Energy Systems Company (Poland). Comprehensive CHP, P2G & P2P technology, a new era in power engineering, chemistry and environmental protection.
- IQGarden Company (Poland). Development of a remote plant monitoring system for the Polish Green Wall project (EMP) in the IQ GARDEN monitoring system for the Rotunda Bank PKO BP SA building in Warsaw at Rondo Dmowskiego (Warsaw City Centre).

IMPLEMENTATION OF TECHNOLOGIES, STRUCTURES, PROCESSES, SOLUTIONS AND PROCEDURES

Innovative remote system for monitoring the physiological condition of plants "iPlant" developed as part of the Incubator of Innovation + project (Warsaw University of Life Sciences). The product is in the form of a prototype. TRL level is IV. The notified subject of commercialization does not yet have the protection of intellectual property rights. It was not registered in the Polish patent office or in a foreign office. The subject of commercialization is not protected due to the use of "Open Source" IT tools and the use of commercial image converters (available on the market). iPlant is a non-invasive health monitoring system based on metabolic data coming directly from plants. It was created in response to the needs of enterprises (among others, vegetable producers under covers at an industrial scale), eg. "Lafoge" Wiesław Kształ, "Bobus" Borowiak Łukasz and "Norbert Kochanowski", sports facilities and others. Solutions applied in iPlant technology will contribute to the development of Polish companies and increase their revenues, which will create the possibility of business expansion.

In addition, the system will support the development of certified crop systems under cover, capable of competing on international markets. An additional benefit is the construction of human capital by employing scientists, specialists, diagnostics and experts in the areas of sustainable crop cultivation, plant intelligence and their impact on improving the quality and profitability of crops.

Possible patent reservation of the system may give the possibility to build sales through own production and sell to third parties the rights to use proprietary products at a later period, after the expansion on the domestic market, internationalization of the iPlant brand.

EXPERTISES AND OTHER STUDIES MADE TO ORDER BY PUBLIC INSTITUTIONS OR ENTREPRENEURS

• Ministry of Agriculture (United Arab Emirates).

• Agriculture Departments of the Agricultural Academy in Damascus and Aleppo (Syria).

• University of Agriculture (Nitra, Slovakia).

• Agroecological University (Zhytomyr, Ukraine).

• IHAR-PIB (Branches of Radzików and Jadwisin, Poland).

• ICARDA International Center for Agricultural Research in Dry Areas (Syria).

• ACSAD Arab Center for Research on Desert Zones and Dry Lands (Syria).

• Corvinus University (Budapest, Hungary).

• Babes-Bolyai University (Cluj-Napoca, Romania).

• University of Copenhagen (Copenhagen, Denmark).

• Czech University of Agriculture (Praha, Czech Republic).

Participation in creating the project of the Experimental Biology Center at the Warsaw University of Life Sciences. My contribution consisted in planning equipment of the Plant Productivity Laboratory in modern and computerized control and measurement equipment (2013-2017).

PARTICIPATION IN EXPERT AND COMPETITION TEAMS (WORK AS REVIEWER/CONSULTANT/ASSESSOR)

• An expert to assess applications for national projects, e.g. Information Processing Center (OPI) (2008-2009), National Center for Research and Development (NCRD) (2009-2014).

Organization	Year	Project type	Numer of projects
NATIONAL INFORMATION PROCESSING INSTITUTE	2008	Research and development Operational Program Innovative Economy	1
	2009	Research and development Operational Program Innovative Economy	1
National Center for Research and Development	2009	Research project	1
	2012	Research project	11
	2012	Research and development Operational Program Innovative Economy	2
	2013	Initial applications for co-financing of the project as part of the applied research program - PBS	10
	2014	II Call GEKON	1
	2014	Initial applications for co-financing of the project as part of the applied research program - PBS	12
Total			**39**

• Expert in the MNiSW grant No. N 305 05332/1931 "Recycling of sewage sludge in the intensification of organic energy crops used as an eco-biofuel and in phytoremediation of degraded areas and eutrophicated waters". Cooperation with the Department of Plant Development and Growth, University of Lodz, 2007-2010.

• Expert for task evaluation at the request of ZOM Warszawa "Measurement of soil moisture and chlorophyll fluorescence of tree leaves" as part of research into the use of selected tree species in the street areas in Warsaw ". Cooperation with the Department of Dendrology, Faculty of Horticulture and Landscape Architecture at Warsaw University of Life Sciences, 2008-2009.

• Expert in the research topic 27-U-15 "Filters in a closed water cycle in forest nurseries, as a method of eliminating parasitic and quarantine organisms from the planting material". Cooperation with the Forestry Research Institute, 2007-2008.

• Expert in the KBN grant N305 029 31/1226 "The importance of interspecific interactions in the Impatiens parviflora impatiens D.C. in the Masurian Landscape Park. " Cooperation with the Ecological Research Center, 2006-2008.

• Expert in the KBN grant No. 3 PO4G 059 25 "The use of higher plants for the development of bioassays for the indication of toxic contamination present in drinking water reservoirs". Department of Plant Development and Growth, University of Lodz, 2003-2006.

• Consultant in the KBN grant No. 3 P04G 053 24 "Growth of native tree species under conditions of urban and natural environment", 2003-2005.

PARTICIPATION IN THE ASSESSMENT OF INTERNATIONAL PROJECTS

Organisation	**Year**	**Call**	**No. or reviewed projects**
European Commission Brusssels, Belgium	2008	Knowledge-Based Bio-Economy FP7- KBBE-2008	8
	2008	Marie Curie International Research Staff Exchange Scheme FP7-PEOPLE-2008-IRSES	6
	2008	Marie Curie Individual fellowships FP7-PEOPLE-2008-IEF-IIF-IOF	22
	2009	Marie Curie International Research Staff Exchange Scheme	12

		FP7-PEOPLE-2009-IRSES	
	2009	Marie Curie Individual fellowships FP7-PEOPLE-2009-IEF-IIF-IOF	20
	2010	Marie Curie International Research Staff Exchange Scheme FP7-PEOPLE-2010-IRSES	14
	2010	Marie Curie Individual fellowships FP7-PEOPLE-2010-IEF-IIF-IOF	18
	2011	Marie Curie International Research Staff Exchange Scheme FP7-PEOPLE-2011-IRSES	14
	2011	Marie Curie Individual fellowships FP7-PEOPLE-2011-IEF-IIF-IOF	18
	2012	Marie Curie Individual fellowships FP7-PEOPLE-2012-IEF-IIF-IOF, panel Environment, **funkcja Vice Chair (Superecenzent)**	54
	2013	Marie Curie Individual fellowships FP7-PEOPLE-2012-IEF-IIF-IOF, panel Environment, **funkcja Vice Chair (Superecenzent)**	94
	2013	The Marie Curie International Research Staff Exchange Scheme FP7-PEOPLE-2013-IRSES	12
	2013	Marie Curie Career Integration Grants (CIG)	19
	2014	**HORIZON 2020** H2020-MSCA-IF-2014, **funkcja Vice Chair (Superecenzent)**	145
	2015	**HORIZON 2020**	61

		H2020-MSCA-IF-2015 European& Global Fellowships, **funkcja Vice Chair (Superecenzent)**	
	2016	H2020-MSCA-IF-2016 European& Global Fellowships, **funkcja Vice Chair (Superecenzent)**	83
	2017	H2020-MSCA-IF-2017 European& Global Fellowships, **funkcja Vice Chair (Superecenzent)**	27
	2017	Human Resources Strategy for Researchers (HRS4R)	5
	2018	Erasmus Mundus Joint Master Degrees (EMJMD) applications-2018-EAC/A05/2017	7
Czech Science Foundation (GA CR), Czechy	2008	Research project/National call	2
Slovak Research and Development Agency (APVV), Słowacja	2006	Research project/National call	1
	2007	Research project/National call	1
	2014	Research project/National call	1
	2015	Research project/National call	4
	2018	Research project/National call	2
South Moravian Centre for International Mobility (SoMoPro Programme), Czechy	2009	Research project/National call	1
Polsko–Norweski Fundusz Badań Naukowych	2008	Research project/National call	1
Science and Technological Development Fund (STDF), Egipt	2010	Research project/National call	8
COOPERATION 2011 - Partnerships of Production and Research Institutions in Focused Research and Technology Sectors - Hellenic	2011	Research project/National call	6

Republic Ministry of Education, Lifelong Learning & Religious Affairs Special Agency, Grecja			
The Investment and Development Agency of Latvia	2017	Research project/National call	1
Lithuania	2017	Research project/National call	2
Total			**669**

REVIEWING THE WORKS PUBLISHED IN INTERNATIONAL JOURNALS WITH THEIR IMPACT FACTOR

Journal name	Year	No. reviewed papers	$IF_{5\ year}$
Acta Physiologiae Plantarum	1994-2011	7	1.530
Computers and Electronics in Agriculture	2009	1	1.998
Dendrobiology	2009	1	0.591
Folia Forestalia Polonica	2009-2012	3	-
Journal of Agronomy and Crop Science	2009-2011	2	2.145
Photosynthetica	2009-2012	2	1.219
Taibah University Journal	2011	2	-
Environmental and Experimental Botany	2012	1	3.553
Journal of Environmental Monitoring	2012	1	2.137
OMICS-A Journal of Integrative Biology	2012	1	2.518
Folia Forestalia Polonica	2012	1	-
African Journal of Biotechnology	2013	1	-
Ecological Engineering	2013	1	3.479
Environmental and Experimental Botany	2013	1	3.529
Folia Forestalia Polonica	2013	1	-
Frontiers in Plant Science	2013	1	3.645

Global Journal of Botanical Science	2013	1	-
Metallomics	2013	1	4.010
Plant Biosystems	2013	1	1.863
Plant Omics	2013	1	0.802
Plant, Soil and Environment	2013	1	1.279
Photosynthesis Research	2013	1	3.365
Acta Physiologiae Plantarum	2014	2	1.671
Ecology and Evolution	2014	1	2.343
Environmental Science and Pollution Research	2014	1	2.920
Frontiers in Plant Science	2014	1	3.990
Photosynthetica	2014	1	1.403
Plant Biology	2014	1	2.633
Plant Physiology and Biochemistry	2014	2	3.330
Proceedings of the National Academy of Sciences, Biological India	2014	1	0.212
Sensors	2014	1	2.474
The Scientific World Journal	2014	1	-
Photosynthetica	2015	1	1.403
Springer NASB Biological Sciences	2015	1	0.396
Frontiers in Plant Sceince	2015	1	0.212
Acta Physiologiae Plantarum	2015	2	1.671
Plos One	2015	1	3.702
Plant Biosystems	2015	1	1.863
Photosyntetica	2015	1	1.403
Industrial Crops and Products	2015	1	3.500
Theoretical and Experimental Plant Physiology	2015	1	0.885
Archives of Environmental Protection	2015	1	0.900

Journal of Photochemistry and Photobiology B Biology	2015	2	3.035
Environmental Science and Pollution Research	2015	1	2.920
Analytical Methods	2015	1	1.820
Biologia Plantarum	2015	1	1.665
Arabian Journal for Science and Engineering	2015	1	0.728
Plant, Soil and Environment	2015	1	1.407
Global Journal of Botanical Science	2015	1	-
Frontiers in Plant Science	2015	1	4.495
Web ecology WE	2015	1	0.793
Spectroscopy Letters	2015	1	0.800
Scientific Reports	2015	1	5.228
Journal of Agricultural Science and Technology	2015	1	0.877
Plant Physiology and Biochemistry	2015	1	2.928
Photosynthesis research	2016	1	3.864
Photosynthetica	2016	3	1.507
Plant, Soil and Environment	2016	1	1.407
Plant Physiology and Biochemistry	2016	1	2.724
Rice Science	2016	1	1.521
Optics Express	2016	3	3.307
Journal of Luminescence	2016	1	2.686
OMICS- Journal of Bioengineering & Biomedical Science	2016	1	0.750
Plant Biology	2016	1	2.106
Global Journal of Botanical Science	2016	1	-
Frontiers in Plant Sceince	2016	4	4.298
Journal Agriculture (Poljoprivreda)	2016	1	-
Acta Scientiarum Polonorum Hortorum Cultus	2016	1	0.550

Computers and electronics in agriculture	2016	1	2.091
Environmental Science and Pollution Research	2016	1	2.741
Annals of Agricultural Science	2016	1	1.291
iForest - Biogeosciences and Forestry	2016	1	1.623
Folia Forestalia Polonica	2017	1	-
Environmental and Experimental Botany	2017	1	3.666
Photochemical & Photobiological Sciences	2017	1	2.902
Ecotoxicology	2017	1	1.987
Indian Journal of Experimental Biology	2017	1	1.475
PLOS ONE	2017	2	2.766
Global Journal of Botanical Science	2017	1	-
Plant Physiology and Biochemistry	2017	1	2.718
Functional Plant Biology	2017	1	2.083
Photosynthetica	2017	2	1.740
Agronomy	2017	1	1.419
Civil and environmental engineering reports	2017	1	2.210
BMC Plant Biology	2017	1	3.930
Optics express	2017	1	3.356
Journal of Photochemistry and Photobiology B-Biology	2017	1	3.165
Plant Biosystems	2017	1	1.203
Environmental Engineering and Management Journal	2017	1	1.000
Acta Physiologiae Plantarum	2018	1	1.691
Agronomy	2018	1	1.419
Current Bioactive Compounds	2018	1	-
Environmental and Experimental Botany	2018	1	3.666
Journal of Experimental Botany	2018	1	6.044

Journal of Photochemistry and Photobiology B: Biology	2018	1	3.165
Plant Physiology and Biochemistry	2018	2	2.718
PLOS ONE	2018	1	2.766
Plant, Soil and Environment	2018	1	3.306
Total		**121**	

REVIEWING BOOKS

• The Red Clover Seed Production, Medicinal Uses, Health and Environmental Benefits. Plant Science Research and Practices, 2017. Żuk-Gołaszewska K. (Ed.). Nova Science Publishers, Inc. New York. ISBN - 978-1-53611-787-5, p. 122

• Silicon in Plants: Advances and Future Prospects, 1st Edition, 2016. Durgesh Kumar Tripathi, Vijay Pratap Singh, Parvaiz Ahmad, Devendra Kumar Chauhan, Sheo Mohan Prasad (Eds.). CRC Press, ISBN 9781498739498 - CAT # K26643, p. 378

• Biocity. Volume 1, 2015, Górski Ferdynand, Łaskarzewska-Średzińska Małgorzata (Eds.). Foundation of the Faculty of Architecture, Warsaw University of Technology, ISBN 978-83-937604-2-8, p. 240

REVIEW OF THE HABILITATION ACHIEVEMENTS

Year	Name and surname	Institutue/University	The output of the work
2016	Dr. Manzer Hussain Siddiqui	Kingdom of Saudi Arabia King Saud University	Associate Professor Position

REVIEWING DOCTORAL DISSERTATIONS

Year	Name and surname	Institute/University	Thesis title
2012	P. Senthilkumar	Division of Plant Biotechnology, UPASI Tea Research Foundation, Tea Research Institute, India	Studies on Grey Blight Disease (Pestalotiopsis spp.) resistance in Tea using Biochemical and Molecular approach

2014	Corina Carpentier	Masaryk University, Faculty of Science, Brno Czech Republic	The Carpet of the Sun- On the Quantification of Algal Biomass
2014	Monika Sasal	Wydział Rolniczo-Ekonomiczny, Uniwersytet Rolniczy Im. Hugona Kołłątaja w Krakowie	Przydatność pomiarów szybkiej kinetyki fluorescencji chlorofilu do oceny mrozoodporności pszenżyta i pszenicy
2015	Nahidah Bashir	Bahauddin Zakariya Uiniversity, Multan, Pakistan	Biometric and biochemical markers for drought tolerance in diverse germplasm of mazie (*Zea mays* L.) crop
2016	Anna Maksymowicz	Instytut Fizjoligii Roślin Im. Franciszka Górskiego Polskiej Akademii Nauk, Kraków	Wykorzystanie nowych regulatorów w kształtowaniu produktywności wybranych roślin uprawnych
2016	Choon Sea Yeat	Universiti Putra, Malaysia	Thesis title: Evaluation of torch ginger (*Etlingera elatior*) as potential cut flower
2016	Damian Wach	Instytut Uprawy Nawożenia i Gleboznawstwa, Państwowy Instytut Badawczy W Puławach	Przydatność wybranych wskaźników fizjologicznych do oceny wrażliwości kukurydzy na stres suszy zależnie od zaopatrzenia w potas
2016	Syed Ali Ahmad Shah	Bahauddin Zakariya Uiniversity, Multan, Pakistan	Phytoremediation potential of some crop plants for heavy metals
2017	Dilek Killi	Departmen of Agrifood Production and Environmental Sciences, University of Florence	The responses of crop and tree species to future elevated [CO_2], temperature and drought stress
2018	Muhammad Iqbal	Bahauddin Zakariya Uiniversity, Multan, Pakistan	Identification of some key physiological and biochemical indicators for salt tolerance in canola (*Brassica napus* L.)

2018	Małgorzata Szary	Wydział Biologii i Ochrony Środowiska, Uniwersytet Śląski, Katowice	Warunki siedliskowe terenów poprzemysłowych a biologia traw: Calamagrostis epigejos i Phragmites australis w aspekcie ich wykorzystania w rekultywacji

MEMBERSHIP IN INTERNATIONAL ORGANIZATIONS AND SCIENTIFIC SOCIETIES

• Polish Society for Experimental Biology of Plants - PTBER

• Federation of European Societies of Plant Biology - FESPB

• New York Academy of Sciences- NYAS

• American Society of Plant Physiologists - ASPP

• International Society of Photosynthesis Research - ISPR

• UK Controlled Environment Users' Group - CEUG

INTERNSHIPS

• Visiting Professor (Senior Guest Professor of the Research, Yantai Institute of Coastal Zone Research, Yantai, China (XII 2012 - December 2015).

• One-year scholarship as part of the National Slovak Scholarship Program for the Support of Mobility of Students (PhD. Students, University Teachers and Researchers) (2006/2007).

• Internships at the University of Geneva - Switzerland "Laboratory of Bioenergetics". Scientific research (together with Professor Reto Strasser) on plant chlorophyll fluorescence under stress conditions in the periods: April-May 2001, June-September 2005, June-September 2006, June-September 2007, June-September 2008, June-September 2009.

• International Postgraduate Training Courses and Study Stays for Teachers in Agricultural Schools by UNESCO - University of Agriculture Nitra, Czechoslovakia. 3.09-9.11.1990.

• PhD scholarship in Poland received under a bilateral agreement between the Syrian and Polish government (1985).

SUPEVISION (PROMOTOR)

Comleted Doctorates

No.	PhD Student Name and Surname	Thesis title	Institute	Defense date
1	Kristýna Kunderlíková (Co-supervisor)	Regulation of photosynthesis of wheat mutants chlorophyll-deficient in changing conditions	Fakulta Agrobiológie A Potravinových Zdrojov, Slovenská Poľnohospodárska Univerzita V Nitre, Slovakia	16.08.2016
2	Klaudia Brücková (Co-supervisor)	Phenotyping of Salad genetic resources in terms of production and quality in changing environmental conditions	Fakulta Agrobiológie A Potravinových Zdrojov, Slovenská Poľnohospodárska Univerzita V Nitre, Slovakia	30.08.2017
3	Jacek Mojski (PhD defended with honors from the Scientific Council of ITP)	Photosynthetic productivity of ornamental plants from the resources of rural home gardens used in vertical garden conditions	Institute of Technology and Life Sciences (ITP)	31.08.2018
4	Henryk Kociel	The usefulness of the structural substrate for the development of trees in urban areas	Institute of Technology and Life Sciences (ITP)	03.09.2018
5	Tomasz Horaczek	The reaction of the photosynthetic apparatus Miscanthus giganteus plants (Miscanthus x gigantheus Anderss.) Growing in conditions of deficiency of	Institute of Technology and Life Sciences (ITP)	06.09.2018

		selected macroelements in the substrate		
6	Izabela Samborska	The effect of deficiency of selected mineral components on the performance of the photosynthetic apparatus in radish plants	Faculty of Agriculture and Biology, Warsaw University of Life Sciences (SGGW)	18.04.2019
7	Adam Adamski	Developing a control system for intelligent greenhouse lighting management based on LED	Institute of Technology and Life Sciences (ITP)	06.06.2019
8	Adam Ławicki	Development of an intelligent system for data collection based on image analysis from visible light cameras and a mobile platform moving in a greenhouse environment	Institute of Technology and Life Sciences (ITP)	06.06.2019
9	Szymon Rusinowski	Efficiency and intensity of the photosynthesis process of energy crops grown on soils contaminated with heavy metals	Faculty of Agriculture and Biology, Warsaw University of Life Sciences (SGGW)	07.01.2020

Runing Doctorates

No.	**PhD Student Name and Surname**	**Thesis title**	**Institute**	**Thesis opening date**
1	Magdalena Cetner	Functioning of photosynthetic apparatus of radish plants (*Raphanus sativus* L. var. Sativus) growing in conditions of deficiency of selected mineral components	Faculty of Agriculture and Biology, Warsaw University of Life Sciences (SGGW)	28.01.2016

ACTIVE PARTICIPATION IN CONFERENCES - DELIVERING PAPERS

Before obtaining the academic degree of Docotr of Sceinces

Regularly for many years at every stage of my academic career I have been actively participating in scientific conferences, which are for me a unique opportunity to exchange knowledge and experience. in the period before obtaining the posdoctoral degree, I delivered papers at 27 conferences, including 25 in English at international conferences.

After obtaining the academic degree of Docotr of Sceinces

Invariably for many years at every stage of my academic career I have been actively participating in scientific conferences, which are for me a unique opportunity to exchange knowledge and experience. in the period after obtaining the postdoctoral degree, I delivered papers at 27 conferences, including 17 in English at international conferences.

PARTICIPATION AS EXPERT IN PROJECTS ASSESSMENT/EVALUATION

Before obtaining the academic degree of Docotr of Sceinces

For many years, I have been a recognized reviewer in international and domestic programs, financing research and R & D projects as well as scholarships. at the request of the European Commission I reviewed in 2008-2011 about 130 projects under various programs (Knowledge-Based Bio-Economy FP7-KBBE-2008, Marie Curie International Research Staff Exchange Scheme FP7-PEOPLE-2008-IRSES, FP7-PEOPLE-2008 -IEF-IIF-IOF, FP7-PEOPLE-2009-IRSES, FP7-PEOPLE-2010-IRSES, FP7-PEOPLE-2010-IEF-IIF-IOF, FP7-PEOPLE-2011-IRSES, FP7-PEOPLE-2011-IEF -IIF-IOF). In 2012, I received the role of Vice Chair (Superreview) and as part of Marie Curie Individual fellowships FP7-PEOPLE-2012-IEF-IIF-IOF, panel Environment, I was responsible for reviewing over 50 projects. In the years 2006-2011, I also reviewed two research projects for the Czech Science Foundation (GA CR), 2 for the Slovak Research and Development Agency (APVV), 1 for the South Moravian Center for International Mobility (SoMoPro Program), 1 for the Polish-Norwegian Fund Research Scientists, 8 for the Egyptian Science and Technological Development Fund (STDF) and 6 as part of the Greek program commissioned by COOPERATION 2011 - Partnerships of Production and Research Institutions in Focused Research and Technology Sectors - Hellenic Republic Ministry of Education, Lifelong Learning & Religious Affairs Special Agency. I also reviewed 16 research and R & D projects in POIG for the National Center for Research and Development.

After obtaining the academic degree of Docotr of Sceinces

As a scientist with the title of doctor habilitated, in the years 2013-2018 I reviewed in total over 460 research, research and development and scholarship projects. at the request of the European Commission I was the Vice Chair and was responsible for the final shape of the review of 410 projects under the programs: Marie Curie Individual fellowships FP7-PEOPLE-2012-IEF-IIF-IOF (Panel Environment), HORIZON 2020 H2020-MSCA-IF -2014, HORIZON 2020 H2020-MSCA-IF-2015 European & Global Fellowships, H2020-MSCA-IF-2016 European & Global Fellowships, H2020-MSCA-IF-2017

European & Global Fellowships. I was a reviewer of 43 projects commissioned by the European Commission (The Marie Curie International Research Staff Exchange Scheme FP7-PEOPLE-2013-IRSES, Marie Curie Career Integration Grants (CIG), Human Resources Strategy for Researchers (HRS4R), Erasmus Mundus Joint Master Degrees (EMJMD) applications- 2018-EAC / A05 / 2017). In addition, I evaluated a total of 8 projects for the Slovak Research and Development Agency (APVV) and The Investment and Development Agency of Latvia. From among the national units, a review of 13 projects under the second GEKON Competition and applied PBS programs was carried out by the National Center for Research and Development.

RECEIVED AWARDS ZND DISTINCTIONS

2017 - 1st degree award for scientific achievements, Rector of Warsaw University of Life Sciences

2016 - 1st degree award for scientific achievements, Rector of Warsaw University of Life Sciences

2016 – Silver medal "For many years of service' (over 20 years)

2015 - Distinction of scientific, didactic and organizational achievements in the period 2104-2105 by the commission for the assessment of WRiB SGGW employees

2014 - Jubilee Award, Warsaw University of Life Sciences

2013 – 2nd degree award for scientific achievements, Rector of Warsaw University of Life Sciences

2013 - Distinction of scientific achievements by the Habilitation Committee and the WRiB Council - SGGW

2010 – 3rd degree award for scientific achievements, Rector of Warsaw University of Life Sciences

2009 - The Rector's Award of the Warsaw University of Life Sciences (SGGW) for the first in Polish language textbook on chlorophyll fluorescence

1993 - Honorable mention of the Agricultural Faculty of the Warsaw University of Life Sciences (SGGW) for a doctoral dissertation

ACHIEVEMENTS IN THE AREA OF DIDACTICS

Before obtaining the academic degree of Docotr of Sceinces

1) Courses and lectures

As part of didactic work, I conducted courses for students of the Faculty of Agriculture and Biology of WULS-SGGW (Agriculture and Biology), but also for students of the field of Gardening at the Faculty of Horticulture and Landscape Architecture at WULS-SGGW. It was 6 different topics. I also conducted subjects in English that were intended for foreign exchange students under the Erasmus program. It was 5 topics.

a. in Polish for students of Biology, Agriculture and Horticulture

• Plant physiology

• Biological yielding and biological progress

• Plant physiology with biochemistry

• The use of modern computerized equipment in plant physiological studies and in agricultural sciences

• The physiology of yielding

• Biological progress and yielding biology

b. in English for Erasmus students

- Physiology of plants and its production under climate change
- The use of computerized and portable instruments in the field of agriculture and biological researches
- Photosynthetic crop productivity under unfavorable environmental conditions
- Energy crops: a renewable energy source
- Climate change impacts on plant growth and crop yield

2) Teaching publications:

I am the main author (90% share), published in 2009, the academic textbook Fri "Fluorescence of chlorophyll in studies of the physiological state of plants". The resumption of this handbook was released in 2010.

3) Scientific care for students

During my work at the Faculty of Agriculture and Biology of WULS-SGGW, until obtaining the postdoctoral degree, I was the supervisor of 6 MA theses and 10 BA or Bachelor's theses at the Faculty of Agriculture and Biology.

a. Masters theses

- Reactions of the photosynthetic apparatus of maize seedlings to salt stress. Agnieszka Rutkowska. Specialty: Agronomy and Agribusiness, 2003.
- The influence of the habit and mass of rizomes on the growth, development and yielding of Miscanthus plants. Barbara Wawryło. Specialty: Biological Basics of Environmental Protection, 2003.
- Gas exchange of monocotyledonous and dicotyledonous plants with photosynthesis mechanism C3 and C4 under various environmental conditions. Marcin Żebrowski. Specialty: Environmental Protection, 2003.
- Chlorophyll content and yield of seeds of traditional and semi-dwarf plants forms of triticale and wheat. Renata Kacprzak-Pacan. Specialty: Environmental Protection, 2005.
- Photosynthetic apparatus reactions to the deficiency of selected mineral components in spring barley. Anna Bartosik. Specialty: Agronomy and Agribusiness, 2006.

- Effect of effective microorganisms on the structure and functioning of the Arabidopsis thaliana photosynthetic apparatus under conditions of salt stress and drought. Katarzyna Siudak. Specialty: Agriculture, 2008.
- The effectiveness of using water in radish plants in conditions of potassium or sulfur deficiency. Adam Stabiński. Specialty: Biotechnology, 2017
- Gas exchange of radish plants growing in conditions of sulfur or potassium deficiency. Adam Chmielewski. Specialty: Biotechnology, 2017
- Estimation of green walls-vertical plants using non-invasive methods. Sezen Ulaş. Specialty: Environmental Protection, 2018

b. Bachelor theses

- The operation of the photosynthetic apparatus of cereals in unfavorable environmental conditions. Agnieszka Grochowska. Field of study: Agriculture. , 2007.
- Fotoinhibition of photosynthetic apparatus of cereal plants under conditions of abiotic stress. Katarzyna Siudak. Agriculture, 2007.
- Effectivity on Arabidopsis plant grown under salinity stress conditions. Alejandra Jimenez Lacasa. Socrates / Erasmus student exchange, Universidad de Castilla-La Mancha, 2007/2008.
- The effect of elevated CO2 concentration and light intensity on the growth and development of hydrangea macrophylla. Marta Gruca. Field of Gardening, 2008.
- Drought effects on Photosynthetic activity of Arabidopsis plants. Da. Silvia Pérez Santero. Socrates / Erasmus student exchange, Uviversidad Politecnica de Valencia Escuela Tecnica Superior del Medio Rural y Enologia, 2008.
- Effect of microorganism on arabicopsis plants. Inci Şahin. Socrates / Erasmus student exchange Akdeniz University, 2008
- The effect on natural green fertilizer on photosynthetic activity of tomato seedlings. Osman Tasa. Socrates / Erasmus student exchange, Cukorova University, 2008
- Inhibition of photosynthesis at photosystem II caused by Tolkan herbicide on barley seedlings. Miyesser Aycan. Socrates / Erasmus student exchange, Anadolu University, 2008.Water stress effects on gas exchange of local Romanian tomato variety Salaj. Natasa Matis. /Erasmus student exchange, Agricultural Science and Veterinary Medicine University, 2011.
- Measurements of different parameters related to monitoring of seasonal changes (from May to July) of water quality in a pond in Warsaw City. Marine Skonieczny. Erasmus student exchange, Ecole, Nationale Du Genie De L'eau et De L'environment De Strasbourg, 2012.

4) Developing framework programs

I participated in the development of framework programs for the following subjects:

• Plant yield physiology for Biotechnology and Biology,

• Harvest biology for Agriculture,

• optional subjects Selected aspects of plant ecophysiology for the Biology and Physiological bases of plant modeling for Agriculture.

As part of the project "Program for modernizing education in WULS-SGGW to ensure competitiveness and high competence of graduates", financed under the Human Capital Operational Program (POKL) and co-financed from the European Social Fund (KSI-POKL.04.01.01.-00-232 / 08 -0) I co-created the e-learning program and education system, introduced in the academic year 2009/2010 at the Warsaw University of Life Sciences. I was the author of the chapter in which the course of photosynthesis in higher plants was presented.

I participated in creating the project of the Experimental Biology Center at the Warsaw University of Life Sciences. My contribution consisted in planning equipment of the Plant Productivity Laboratory in modern and computerized control and measurement equipment. this Laboratory will include sub-units: gas exchange and plant chlorophyll fluorescence laboratory, plant and field architecture analysis laboratory, physiology of plant growth and development, and ecological research laboratory.

5) Stays abroad as a lecturer (lectures and seminars)

As part of the Socrates / Erasmus program (LLP Erasmus program), I conducted lectures in English at the 10 academic centers listed below:

• Slovak University of Agriculture in Nitra, Slovakia (2005/2006, 10-18.02.2006), the title of the lecture: Stress physiology and PSII function.

• Corvinus University of Budapest in Budapest, Hungary (2005/2006, 2-9 May 2006), titles of lectures: The use of computerized instruments in the field of agricultural researches; Chlorophyll a fluorescence as a tool to identify stress in plants; JIP test: analyzing chlorophyll and fluorescence signals; How to make successful seminar or presentation?

• Czech University of Agriculture in Prague, Czech Republic (2006/2007, 14-21.01.2007), lecture title: Photosynthesis and plant production.

• Copenhagen University in Copenhagen, Denmark (2006/2007, 11-18.02.2007), lecture titles: Photosynthesis and chlorophyll fluorescence; Plant gas exchange.

• Babes-Bolyai University, Cluj-Napoca in Romania (2007/2008, 13-20 October 2007),

lecture title: The use of portable and biologicalized instruments.

• Pisa University, Pisa in Italy (2010/2011, 29/11/2010),

lecture title: Chlorophyll and fluorescence as a tool to identify stress in plants.

• University of Florence, Florence in Italy (2010/2011, 30/11/2010),

lecture title: Chlorophyll and fluorescence as a tool to identify stress in plants.

• Slovak University of Agriculture in Nitra, Slovakia (2010/2011, 25/04/2011 - 30/04/2011),

lecture title: Chlorophyll and fluorescence as a tool to identify stress in plants.

• Universidade de Aveiro, CESAM Center for Environmental and Marine Studies, Portugal (2011/2012, 22-27.05.2012),

lecture title: The application of chlorophyll fluorescence as a tool for monitoring photosynthetic activity of sea slugs.

In 2012, I also received the position of: Senior Guest Professor at the Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences, China. The stay took place as part of the International Partnership Program for the Creative Research Team supported by CAS / SAFEA. As part of this stay, I introduced numerous seminars and lectures for students and employees of the institute.

After obtaining the academic degree of Docotr of Sceinces

1. Courses and lectures

As part of didactic work, I conducted courses for students of the Faculty of Agriculture and Biology of WULS-SGGW (Agriculture and Biology), but also for students of the field of Gardening at the Faculty of Horticulture and Landscape Architecture at WULS-SGGW. It was 5 topics. I also conducted subjects in English that were intended for foreign exchange students under the Erasmus program. It was 6 topics.

a. in Polish for students of Biology, Agriculture and Horticulture

- Plant Physiology,
- Plant yielding
- The use of modern equipment
- The use of modern research techniques in agriculture and biology
- Techniques for measuring the vital processes of plants

b. in English for Erasmus students

- Photosynthetic crop Productivity under unfavourable environmental conditions
- Physiology of plants and its production under climate changes
- Climate Change impacts on plant growth and crop yield
- Energetic plants: a renewable energy source
- Sensors indices and bioindicators for agriculture and biology
- The use of computerized and portable instruments in the field of agriculture and biological researches

LIST OF ORGANIZATIONAL ACHIEVEMENTS

I. Conducted scientific seminars

Before obtaining the academic degree of Docotr of Sceinces

It is extremely important for me to transfer knowledge to scientists and students, as well as employees of enterprises for whom information on the use of chlorophyll fluorescence measurement techniques can increase interdisciplinary research or increase the company's innovation level. Therefore, I am very active in this area and before obtaining the postdoctoral degree I have carried out (organized) 34 scientific and / or training seminars in units around the world:

- Fluorescence of chlorophyll and infections of oak leaves on research surfaces of the HESOFF project. Pracownia Przetwarzania Danych CTK ILOT, Warsaw, Poland, 04/12/2013

- Hydrological conditions for the functioning of the Zemborzycki Reservoir. Reading. Faculty of Earth Sciences and Spatial Management of UMCS. Lublin, Poland, 14/11/2013
- Plant gas exchange measurements by IRGA. The Center for Environmental Research & Studies (CERS), Jazan University, Jazan, Kingdom of Saudi Arabia, 23/12/2012
- Environmental monitoring by computerized and portable devices. King Abdulaziz University, Jeddah, Kingdom of Saudi Arabia, 22/12/2012.
- An international scientific seminar: "Mutarine Fluidimeter" and "Plant phenotyping by prompt and delayed fluorescence methods". Warsaw, 10/05/2012
- Oxygen measurement in animal tissues using Clark Electrodes (Oxygraph System). Faculty of Medicine, AbdulMohsen AbdulRazzaq Health Science Center, Kuwait University, 18-20.03.2012
- Application of AlgaeOnlineAnalyser for continuous monitoring of algae in rivers, lakes and other water reservoirs. Aquaculture Center, University of Warmia and Mazury in Olsztyn, 16/03/2012
- Fluorescence of chlorophyll - the basis of technology and the possibility of its application in gardening and fruit-growing. Seminar for employees of the COOLEX company and the Department of Gardening SGGW, 12/03/2012
- Morphology (microscopic observation) / Real-time PCR and basic laboratory tasks (electrophoresis, spectrophotometers) and chlorophyll fluorescence in healthy and diseased seedlings. Training School: Detection and Diagnosis of Phytophthora in Forest Ecosystems (COST Action FP0801). Forest Research Institute, Sękocin Stary, 27.06 - 01.07.2011
- Modern physiological measurements using modern, computerized, portable apparatus for assessing the gas exchange of plants, field index, chlorophyll content in leaves and plant water potential. Department of Environmental and Agricultural Development of the University of Warmia and Mazury, Olsztyn, 04.05.2011
- Application of chlorophyll fluorescence measurements in vivo in biological and agricultural research. Faculty of Biology, University of Warsaw, Institute of Botany, Warsaw, 12/04/2011
- Measurements of gas exchange of plants using modern computerized portable apparatus (Institute of Ornamental Plants and Landscape Architecture, University of Life Sciences in Lublin, Lublin, 01/03/2011
- The use of portable instruments to measure conditions (ICARDA), Aleppo, Syria, 21-22.02.2011
- How to measure photosynthesis? (Faculty of Science, Taribah University, Al-Munawarah, Saudi Arabia, 12/01/2011
- The use of portable computerized instruments in biological, ecological and marine researches (Faculty of Marine Science, Faculty of Science, King Abdulaziz University, Jeddah, Saudi Arabia, 10-11.01.2011
- Workshops: Plant gas exchange measurements (Agricultural Research Institute of the Hungarian Academy of Science, Martonvasar, Hungary, 11-12.11.2010
- Environmental and ecological measurements using modern gas analyzers (Bohdan Dobrzański Institute of Agrophysics, Polish Academy of Sciences, Lublin, 20/10/2010

- Measurement of modulated chlorophyll fluorescence signal as a modern research tool (Institute of Plant Genetics PAS, Poznań, 05/10/2010
- Measurement of photosynthesis and gas exchange of plants in studies of the resistance of various grass species to stress (Institute of Soil Science and Plant Cultivation - National Research Institute, Puławy, 19/08/2010
- Methods of chlorophyll fluorescence measurement - application in horticulture (Institute of Horticulture and Floriculture named after Szczepan Pieniążek, Skierniewice, 29/07/2010
- The usefulness and reliability of chlorophyll fluorescence measurement methods in studies of plant resistance to stress (Department of Genetics, University of Silesia, 19.03.2010
- Application of breathing measurement in biological research (Department of Molecular Biology of the Cell of the Faculty of Biotechnology, University of Wroclaw, 1/03/2010
- Application of gas exchange measurements and leaf area index in the assessment of photosynthetic productivity of plants. (Department of Plant Production of the Faculty of Biology and Agriculture, University of Rzeszów, 1-2 December 2009
- Applying chlorophyll fluorescence as a reliable tool in biological and agricultural research (Institute of Plant Physiology, Franciszek Górski, Polish Academy of Sciences, Krakow, 30.11.2009
- Application of chlorophyll fluorescence in biological and agricultural research (Institute of Horticulture and Floriculture, Skierniewice, 15/07/2009
- Fluorescence of chlorophyll and modern systems of photosynthesis measurement in application to biological and agricultural research (Institute of Plant Physiology, Franciszek Górski, Polish Academy of Sciences, Krakow, 19-20 January 2009
- Fluorescence of chlorophyll (University of Warmia and Mazury in Olsztyn, 12/06/2008Pomiary w procesie fotosyntezy (Instytut Genetyki Roślin PAN, Poznań, 28.05.2008
- Application of chlorophyll fluorescence in agricultural and biological research (University of Rzeszów, 12.05.2008
- Measurement and examination of the photosynthesis process (University of Agriculture, Szczecin, 9.05.2008
- Training seminar for Dept. Plant Physiology employees on the use of chlorophyll fluorescence imaging apparatus by Photon Instruments, SGGW, 10.03.2008
- Application of chlorophyll fluorescence in agricultural and biological research, for members of PTA Akademia Rolnicza im. H. Kołłątaja, Krakow, 24.01.2008
- Physiological workshops: "Kinetic Imaging of Plant Chlorophyll Fluorescence", Department of Plant Physiology, University of Life Sciences SGGW, Warsaw, Poland, November 26, 2004
- Ecophysiological workshops: "Application of high technology scientific equipment in agriculture." Department of Plant Physiology, University of Life Sciences SGGW, Warsaw, Poland, 12/05/2000

After obtaining the academic degree of Docotr of Sceinces

It is extremely important for me to transfer knowledge to scientists and students, as well as employees of enterprises for whom information on the use of chlorophyll fluorescence measurement techniques can increase interdisciplinary research or increase the company's innovation level. Therefore, I am very

active in this area and after obtaining the postdoctoral degree, I have organized (organized) 10 seminars worldwide in units of:

• Photosynthesis and instruments for advanced research for plant physiology. Mutah University, Karak, Jordan. 8-9.01.2016.

• Molecular aspects of Photosynthesis. Umm al-Qura University in Makkah, Saudi Arabia. 27/01/2016.

• Advanced measurements of plant gas exchange parameters. KAU Faculty of Science, Jeddah. 01/26/2016.

• Advanced measurements of plant gas exchange parameters. The Center for Environmental Research & Studies (CERS), Jazan University, Jazan, Kingdom of Saudi Arabia, 25/01/2016.

• Chlorophyll fluorescence measurements: Pulse Modulated technique. The Center for Environmental Research & Studies (CERS), Jazan University, Jazan, Kingdom of Saudi Arabia, 24/01/2016.

• Organization of the position of the Faculty of Agriculture and Biology at the Warsaw University of Life Sciences at the 19th Science Picnic in Warsaw, organized by the Polish Radio and the Copernicus Science Center, "Light, its intensity and quality in the life of plants". Warsaw, Poland, 09/05/2015

• "Review of European Union Grants from the Kitchen" Marie Skłodowska-Curie Actions- Individual Fellowships. Warsaw University of Life Sciences in Warsaw, Warsaw, Poland. 11/27/2014

• Fluorescence of chlorophyll as a method of assessing the state of the natural environment. Inaugural lecture, Warsaw University of Life Sciences. Warsaw, Poland, 01/10/2014

• Fluorescence of chlorophyll as a method of assessing the physiological state of plants. Seminar: Department of Ornamental Plants of SGGW. Warsaw, Poland, 2/12/2014

• "Application of non-invasive phenotyping approaches to characterize responses of plants to biotic and abiotic stresses", Department of Plant Physiology, Faculty of Agriculture and Biology, Warsaw University of Life Sciences, Poland, 7/03/2014

• “RAPID AND PRECISE ASSESSMENT OF PHYSIOLOGICAL RESPONSE OF PLANTS TOWARDS STRESS USING COMPUTERIZED AND PORTABLE INSTRUMENTS”. Course Area: Life Sciences & Healthcare, Foreign Faculty: Hazem M Kalaji, Poland. Host Faculty: Dr. Jos T. Puthur, Dept. of Botany, University of Calicut, India. Duration: 01-04-2019 to 05-04-2019

MEMBERSHIP IN ORGANIZATIONS, ASSOCIATIONS AND EDITORIAL COMMITTEES

Membership in Scientific Councils and Commissions:

• Member of the Council of the Faculty of Agriculture and Biology, SGGW (since 2013)

• Member of the Scientific Council of the Institute of Technology and Life Sciences in Falenty (from 2017)

• Scientific Committee in Falenty, Deputy Chairman (term of office 2017 -2021)

• Senate Committee of WULS-SGGW for International Cooperation - Member (term of office 2017 -2021)

Memebers of Journals Editorial Board:

- Frontiers Plant Science - Guest Editor (2018)
- Photosynthetica - Associate Editor (from 2015)
- Journal of Coastal Life Medicine (from 2015)
- Frontiers in Agroecology and Land Use Systems (from 2015)
- Global Journal of Botanical Science (from 2013)
- Journal of Environmental Science and Engineering Technology (from 2013)
- Frontiers in Plant Physiology (from 2013)
- World Research Journal of Agricultural & Biosystems Engineering (from 2013)
- Signpost Open Access journal of NanoPhotoBioSciences (from 2013)
- Journal of Central European Agriculture JCEA (2004-2005)

ACTIVE PARTICIPATION IN EVENTS PROMOTING SCIENCE

Starting from 1990 to the present day, I have repeatedly participated in the organizational committees of scientific conferences. Throughout the entire period of my academic career, there were 11 conferences, of which 2 were national conferences and 9 international conferences. They took place in Europe, but also in Russia and in Asian countries.

ORGANIZATION OF SEMINARS AND SCIENTIFIC WORKSHOPS

From 2000 to 2017, I organized 18 seminars and scientific workshops. Some of them took place at the Warsaw University of Life Sciences SGGW, and the lecturers invited by me were Polish scientists and the world. These were mainly scientific events, but also popularizing science.