


## PERSONAL INFORMATION



## Ivica Strelec

 Josip Juraj Strossmayer University of Osijek, Faculty of Food Technology Osijek, Franje Kuhača 18, 31000 Osijek, Croatia

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 <http://www.ptfos.unios.hr/index.php/nastavno-osoblje/prof-dr-sc-ivica-strelec>

Sex M | Date of birth 29/12/1972 | Nationality Croatian

## SCIENTIFIC FIELD(S) &amp; KEYWORDS

(up to 3 fields and up to 10 keywords)

**Field(s):** biotechnology, food technology, biochemistry

**Keywords:** biochemistry, food biochemistry, enzymology, proteins and enzymes, enzyme immobilization, protein purification, industrial food waste transformation

## RESEARCH DATABASES

WOS <https://www.webofscience.com/wos/author/record/730763>

ORCID <https://orcid.org/0000-0003-3999-8499>

SCOPUS <https://www.scopus.com/authid/detail.uri?authorId=23029106000>

GOOGLE SCHOLAR <https://scholar.google.com/citations?user=6ZcKtt8AAAAJ&hl=en>

CROSB/CRORIS <https://www.croris.hr/crosbi/searchByContext/2/4082>

## EDUCATION

15.11.2007.	<p><b>PhD; Biotechnology</b></p> <p>Faculty of Food Technology and Biotechnology, University of Zagreb, Croatia</p>	<p>HKO 8.2, EQF 8; QF-EHEA 3 cycle</p>
14.10.2004.	<p><b>MSc; Chemistry/Biochemistry</b></p> <p>Faculty of Science, University of Zagreb, Croatia</p>	<p>HKO 8.1, EQF 8; QF-EHEA 2 cycle</p>
03.02.1998.	<p><b>MEng; Food Technology</b></p> <p>Faculty of Food Technology, University of Osijek, Croatia</p>	<p>HKO 7.1, EQF 7; QF-EHEA 2 cycle</p>

## WORK EXPERIENCE

10.09.2024. - onward	<p><b>Full professor (tenure)</b></p> <p>Faculty of Food Technology, University of Osijek, Franje Kuhača 18, 31000 Osijek, Croatia</p> <p>Science and higher education</p>
26.06.2019. – 10.09.2024.	<p><b>Full professor</b></p> <p>Faculty of Food Technology, University of Osijek, Franje Kuhača 18, 31000 Osijek, Croatia</p> <p>Science and higher education</p>
31.10.2013. – 26.06.2019.	<p><b>Associate professor</b></p> <p>Faculty of Food Technology, University of Osijek, Franje Kuhača 18, 31000 Osijek, Croatia</p> <p>Science and higher education</p>
31.03.2009. – 30.10.2013.	<p><b>Assistant professor</b></p> <p>Faculty of Food Technology, University of Osijek, Franje Kuhača 18, 31000 Osijek, Croatia</p> <p>Science and higher education</p>

- 29.01.2008. – 31.03.2009. **Senior assistant**  
Faculty of Food Technology, University of Osijek, Franje Kuhača 18, 31000 Osijek, Croatia  
Science and higher education
- 22.11.1999. – 29.01.2008. **Assistant**  
Faculty of Food Technology, University of Osijek, Franje Kuhača 18, 31000 Osijek, Croatia  
Science and higher education
- 01.05.1998. – 22.11.1999. **Engineer - trainee**  
Saponia d.d. Osijek, Matije Gupca 2, 31000 Osijek, Croatia  
Detergent and personal hygiene products production

**THE MOST RELEVANT  
PEER REVIEW  
PUBLICATIONS IN THE  
LAST 5 YEARS**  
(up to 10 publications)

- 
- Strelec, Ivica**, Katarina Peranović, Marta Ostojčić, Krunoslav Aladić, Hrvoje Pavlović, Igor Djerdj, Dalibor Tatar, Nikola Maravić, Željko Skoko, and Sandra Budžaki. **2024**. "Eggshell Waste Transformation to Calcium Chloride Anhydride as Food-Grade Additive and Eggshell Membranes as Enzyme Immobilization Carrier." *Green Processing and Synthesis* 13 (1). <https://doi.org/10.1515/gps-2023-0254>.  
IF (2022) = 4.3      Quartile: Q2
- Strelec, Ivica**, Vladimir Mrša, Dragana Šoronja Simović, Jovana Petrović, Jana Zahorec, and Sandra Budžaki. **2024**. "Biochemical and Quality Parameter Changes of Wheat Grains during One-Year Storage under Different Storage Conditions." *Sustainability* 16 (3): 1155. <https://doi.org/10.3390/su16031155>.  
IF (2024) = 3.9      Quartile: Q2
- Brekalo, Mirna, Blanka Bilić Rajs, Krunoslav Aladić, Lidija Jakobek, Zita Šereš, Saša Krstović, Stela Jokić, Sandra Budžaki, and **Ivica Strelec**. **2023**. "Multistep Extraction Transformation of Spent Coffee Grounds to the Cellulose-Based Enzyme Immobilization Carrier." *Sustainability* 15 (17): 13142. <https://doi.org/10.3390/su151713142>.  
IF (2022) = 3.9      Quartile: Q2
- Strelec, Ivica**, Klara Tomičić, Marko Zajec, Marta Ostojčić, and Sandra Budžaki. **2023**. "Eggshell-Waste-Derived Calcium Acetate, Calcium Hydrogen Phosphate and Corresponding Eggshell Membranes." *Applied Sciences* 13 (13): 7372. <https://doi.org/10.3390/app13137372>.  
IF (2022) = 2.8      Quartile: Q2
- Budžaki, Sandra, Natalija Velić, Marta Ostojčić, Marija Stjepanović, Blanka Bilić Rajs, Zita Šereš, Nikola Maravić, Jovana Stanojev, Volker Hessel, and **Ivica Strelec**. **2022**. "Waste Management in the Agri-Food Industry: The Conversion of Eggshells, Spent Coffee Grounds, and Brown Onion Skins into Carriers for Lipase Immobilization." *Foods* 11 (3): 409. <https://doi.org/10.3390/foods11030409>.  
IF (2022) = 5.2      Quartile: Q1
- Jakobek, Lidija, **Ivica Strelec**, Daniela Kenjerić, Lidija Šoher, Ivana Tomac, and Petra Matić. **2022**. "Simulated Gastric and Intestinal Fluid Electrolyte Solutions as an Environment for the Adsorption of Apple Polyphenols onto  $\beta$ -Glucan." *Molecules* 27 (19): 6683. <https://doi.org/10.3390/molecules27196683>.  
IF (2022) = 4.6      Quartile: Q2
- Lončarić, Melita, **Ivica Strelec**, Valentina Pavić, Vesna Rastija, Maja Kamaš, and Maja Molnar. **2022**. "Green Synthesis of Thiazolidine-2,4-Dione Derivatives and Their Lipoxygenase Inhibition Activity With QSAR and Molecular Docking Studies." *Frontiers in Chemistry* 10 (July). <https://doi.org/10.3389/fchem.2022.912822>.  
IF (2022) = 5.5      Quartile: Q2
- Šafranko, Silvija, Anamarija Stanković, Sugato Hajra, Hoe-Joon Kim, **Ivica Strelec**, Maja Dutour-Sikirić, Igor Weber, et al. **2021**. "Preparation of Multifunctional N-Doped Carbon Quantum Dots from Citrus Clementina Peel: Investigating Targeted Pharmacological Activities and the Potential Application for Fe<sup>3+</sup> Sensing." *Pharmaceuticals* 14 (9): 857. <https://doi.org/10.3390/ph14090857>.  
IF (2021) = 5.215      Quartile: Q2
- Kovač, Tihomir, Ivana Borišev, Marija Kovač, Ante Lončarić, Frane Čačić Kenjerić, Aleksandar Djordjevic, **Ivica Strelec**, et al. **2020**. "Impact of Fullerol C<sub>60</sub>(OH)<sub>24</sub> Nanoparticles on the Production of Emerging Toxins by *Aspergillus Flavus*." *Scientific Reports* 10 (1): 725. <https://doi.org/10.1038/s41598-020-57706-3>.  
IF (2020) = 4.379      Quartile: Q1
- Lončarić, Melita, **Ivica Strelec**, Valentina Pavić, Domagoj Šubarić, Vesna Rastija, and Maja Molnar.

2020. "Lipoxygenase Inhibition Activity of Coumarin Derivatives—QSAR and Molecular Docking Study." *Pharmaceuticals* 13 (7): 154. <https://doi.org/10.3390/ph13070154>.  
IF (2020) = 5.683     Quartile: Q1

## ONGOING AND FINISHED PROJECTS

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### Project leader

#### Young Researchers' Career Development Project – Training New Doctoral Students

Funding: Croatian Science Foundation     Project duration: 12.10.2021.-11.10.2025.

#### Transformation of Eggshell Waste to Value-Added Products

Funding: Osijek-Baranja County     Project duration: 22.12.2020. – 22.12.2021.

#### Applicability of Fluorescence Spectroscopy for Honey Botanical Origin Identification

Funding: Osijek-Baranja County     Project duration: 1.12.2018. – 1.12.2019.

#### Inhibition of aflatoxin synthesis by fullerenes

Funding: Josip Juraj Strossmayer University of Osijek     Project duration: September 2013. – September 2014.

### Project researcher

#### Immobilization of Lipases on Functionalised Carriers Produced from Selected Agro-Food Industrial Waste

Funding: Croatian Science Foundation     Project duration: 18.1.2021. – 17.1.2025.

#### Reducing Food Waste and Rescue Surplus Food Supplies – "ReS-FOOD"

Funding: Co-funded by EU     Project duration: 1.11.2022. – 31.10.2024.

#### Bioconversion of lignocellulosic materials to value added feed

Funding: European regional development fund (ERDF)     Project duration: 20.12.2019. – 20.6.2023.

#### Development and Implementation of the Interdisciplinary Graduate Study Programme "Biotechnology" in English

Funding: European Social Fund (ESF)     Project duration: 12.10.2018. – 12.10.2020.

#### Synergistic Mixtures in Antifungal and Antimycotoxigenic Food Protection

Funding: Ministry of Science     Project duration: 2007. – 2013.

#### Improvement of Quality, Shelf Life and Functionality of Wheat-Based Products

Funding: Ministry of Science     Project duration: 2007. – 2013.

#### Production Promotion of Nutritive and Highly-Valuable Food

Funding: Ministry of Science     Project duration: 2002. – 2006.

## HONORS AND AWARDS

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#### Award for Academic Achievements

Granted by Faculty of Food Technology Osijek     Year: 2021

#### Certificate of Appreciation for the valuable contribution to the aims of ICC

Granted by International Association of Cereal Science and Technology     Year: 2019

#### Certificate of Appreciation for the successful organization of the 7<sup>th</sup> International Congress „Flour-Bread '13“

Granted by International Association of Cereal Science and Technology     Year: 2013

## MEMBERSHIPS

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#### International Association of Cereal Science and Technology

2019 - onward     Function: National Deputy Delegate

#### Croatian Society of Biochemistry and Molecular Biology (HDBMB)

2000 - onward     Function: Member

2019 - onward     Function: Coordinator of Osijek branch

#### Croatian Society of Chemical Engineers

2000 - onward     Function: Member

#### Croatian Microbiological Society

2009 - onward    Function: Member  
 Global Harmonization Initiative  
 2017 - onward    Function: Member

## ADMINISTRATIVE EXPERIENCE

### University Level

Committee for publishing issues  
 1.11.2018. - onward                                      Function: Member

### Faculty Level

Department of Applied Chemistry and Ecology  
 1.10.2021. - 30.09.2023.                                      Function: Head of Department  
 Sub-department of Applied Chemistry, Biochemistry and Instrumental Methods  
 1.07.2019. - 30.09.2021.                                      Function: Head of sub-department  
 Sub-department of Biochemistry and Toxicology  
 1.10.2018. - 30.06.2019.                                      Function: Head of sub-department  
 Sub-department of Biochemistry and Toxicology  
 1.10.2014. - 30.09.2016.                                      Function: Head of sub-department  
 Department of Applied Chemistry and Ecology  
 1.10.2012. - 30.09.2014.                                      Function: Head of Department  
 Committee for publishing issues  
 1.10.2014. - onward    Function: President  
 Committee for acknowledgements  
 17.12.2013. - onward    Function: President  
 Commission for postgraduate specialist study programme Nutrition  
 28.9.2012. - onward    Function: Member

## ORGANIZATIONAL EXPERIENCE

(congresses, workshops, events)

International Congress of the Croatian Society of Biochemistry and Molecular Biology HDBMB22: From Science to Knowledge (Brela, Croatia)  
 28.9. - 1.10.2022.    Function: Member of the Scientific Committee  
 1<sup>st</sup> TwiNSol-CECs Workshop: Advance multicomponent analyses and novel solutions for protection of environmental resources with contaminants of emerging concern in focus (Novi Sad, Serbia)  
 20. - 21.10.2022.    Function: Member of the Scientific Committee  
 1<sup>st</sup> International Conference Food Industry By-Products (Kopački rit, Croatia)  
 26.6.2020.    Function: Member of the Scientific and Organizing Committee  
 10<sup>th</sup> International Congress „Flour-Bread '19“ and 12<sup>th</sup> Croatian Congress of Cereal Technologists (Osijek, Croatia)  
 11. - 14.6.2019.    Function: President of the Organizing Committee  
 9<sup>th</sup> International Congress „Flour-Bread '17“ and 11<sup>th</sup> Croatian Congress of Cereal Technologists (Opatija, Croatia)  
 25. - 27.10.2017.    Function: President of the Organizing Committee  
 7<sup>th</sup> International Congress „Flour-Bread '13“ and 9<sup>th</sup> Croatian Congress of Cereal Technologists (Opatija, Croatia)  
 16. - 8.10.2013.    Function: Member of the Organizing Committee  
 6<sup>th</sup> International Congress „Flour-Bread '11“ and 8<sup>th</sup> Croatian Congress of Cereal Technologists (Opatija, Croatia)  
 12. - 14.10.2011    Function: Member of the Organizing Committee  
 International Congress „Power of Microbes in Industry and Environment 2010“ (Malinska, Croatia)  
 22. - 25.9.2010.    Function: Member of the Organizing Committee  
 5<sup>th</sup> International Congress „Flour-Bread '09“ and 7<sup>th</sup> Croatian Congress of Cereal Technologists (Opatija, Croatia)  
 21. - 23.10.2009.    Function: Member of the Organizing Committee

Congress of the Croatian Society of Biochemistry and Molecular Biology with international participation, HDBMB 2008 (Osijek, Croatia)

17. - 20.09.2008

Function: Congress Secretary and Member of the Organizing Committee

## OTHER ACADEMIC ACHIEVEMENTS

### Book Chapters

Stjepanović, Marija; Budžaki, Sandra; Velić, Natalija; Ostojčić, Marta; Šereš, Zita; Maravić, Nikola; Brekalo, Mirna; **Strelec, Ivica**: Valorizacija i karakterizacija otpadne biomase crvenog luka // Neke mogućnosti iskorištenja nusproizvoda prehrambene industrije / Šubarić, Drago; Jozinović, Antun; Panjičko, Mario (ur.). Osijek: Prehrambeno tehnološki fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, 2022. p. 349-363

Maravić, Nikola; Šoronja-Simović, Dragana; Pajin, Biljana; Budžaki, Sandra; **Strelec, Ivica**; Fišteš, Aleksandar; Velić, Natalija; Šurlan, Jelena; Šereš, Zita: Proizvodnja pektina šećerne repe i njegova primjena // Neke mogućnosti iskorištenja nusproizvoda prehrambene industrije / Šubarić, Drago; Jozinović, Antun; Panjičko, Mario (ur.). Osijek: Prehrambeno tehnološki fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, 2022. p. 139-158

**Strelec, Ivica**; Ostojčić, Marta; Budžaki, Sandra: Transformacija ljuske kokošnjih jaja u proizvode dodane vrijednosti // Neke mogućnosti iskorištenja nusproizvoda prehrambene industrije - Knjiga 3 / Šubarić, Drago; Miličević, Borislav (ur.). Osijek: Prehrambeno tehnološki fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku; Sveučilište u Požezi, 2021. p. 303-327

Budžaki, Sandra; Ostojčić, Marta; **Strelec, Ivica**: Heterogeni biokatalizatori na bazi otpada/nusproizvoda prehrambene industrije za održivu proizvodnju biodizela // Neke mogućnosti iskorištenja nusproizvoda prehrambene industrije – Knjiga 2 / Šubarić, Drago; Babić, Jurislav (ur.). Osijek: Prehrambeno tehnološki fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, 2019. p. 241-258

### Editorial Board of the Scientific Journals

Croatian Journal of Food Science and Technology (2019 – onward)

### Editor of Congress Proceedings

Proceedings of the 10<sup>th</sup> International Congress Flour – Bread '19 / 12<sup>th</sup> Croatian Congress of Cereal Technologists Brašno – Kruh '19 / **Strelec, Ivica**; Jozinović, Antun; Budžaki, Sandra (ur.). Osijek: Prehrambeno tehnološki fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, 2020

Proceedings of the 9<sup>th</sup> International Congress Flour – Bread '17 / 11<sup>th</sup> Croatian Congress of Cereal Technologists Brašno – Kruh '17. / Jozinović, Antun; Budžaki, Sandra; **Strelec, Ivica** (ur.). Osijek: Prehrambeno tehnološki fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, 2018

### Editor of Congress Abstract Books

10<sup>th</sup> International Congress Flour – Bread '19/ 12<sup>th</sup> Croatian Congress of Cereal Technologists Brašno – Kruh '19 Book of Abstracts / Jozinović, Antun; Budžaki, Sandra; **Strelec, Ivica**; Lončarić, Ante (ur.). Osijek: Prehrambeno tehnološki fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, 2019

9<sup>th</sup> International Congress Flour – Bread '17 / 11<sup>th</sup> Croatian Congress of Cereal Technologists Brašno – Kruh '17, Book of Abstracts / Jozinović, Antun; Budžaki, Sandra; **Strelec, Ivica** (ur.). Osijek: Prehrambeno tehnološki fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, 2017

HDBMB2008 Congress of the Croatian Society of Biochemistry and Molecular Biology with international participation; Book of Abstracts / **Strelec, Ivica**; Glavaš-Obrovac, Ljubica (ur.). Osijek: Hrvatsko društvo za biokemiju i molekularnu biologiju (HDBMB), 2008