

# CURRICULUM VITAE

## *Personal*

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Born: Budapest, 14 April 1996  
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## *Education*

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2020 – present      **Doctoral School of Chemistry**  
Department of Physical Chemistry and Materials Science, Faculty of  
Science and Informatics  
*The University of Szeged, Szeged, Hungary*

2023. 09. – 2023. 12. **Visiting Research Student**  
Interdisciplinary Nanoscience Center (iNANO)  
*Aarhus University, Aarhus, Denmark*

2022. 10. – 2023. 01. **Visiting Research Student**  
Australian Institute for Bioengineering and Nanotechnology (AIBN)  
*The University of Queensland, Brisbane, Australia*

2018 – 2020      **Master's Degree of Chemistry**  
Faculty of Science and Informatics  
*University of Szeged, Szeged, Hungary*

2014 – 2018      **Bachelor's Degree of Molecular Bionics Engineering**  
Faculty of Science and Informatics  
*University of Szeged, Szeged, Hungary*

2010 – 2014      Kalocsai Szent István Gimnázium  
*High school, Kalocsa, Hungary*

## Languages

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Hungarian: native

English: fluent

German: basic

## Teaching activity

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General Chemistry Laboratory (6 semesters)

Co-supervision (4 BSc students and 2 high school students)

## Publications

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**A. Szerlauth**, S. Varga, I. Szilágyi

Molecular antioxidants maintain synergistic radical scavenging activity upon co-immobilization on clay nanoplatelets

*ACS Biomaterials Science & Engineering* (2023)

I.Z. Papp, **A. Szerlauth**, T. Szűcs, P. Bélteky, J.F.G. Perez, Z. Kónya, Á. Kukovecz

Fabrication and characterization of a biofunctional zinc oxide/multiwalled carbon nanotube/poly (3,4-ethylenedioxythiophene): polystyrene sulfonate composite thin film

*Thin Solid Films* 778 (2023) 139908

**A. Szerlauth**, Z.D. Kónya, G. Papp, Z. Kónya, Á. Kukovecz, M. Szabados, G. Varga, I. Szilágyi

Molecular orientation rules the efficiency of immobilized antioxidants

*Journal of Colloid and Interface Science* 632 (2023) 260

**A. Szerlauth**, Á. Varga, T. Madácsy, D. Sebők, S. Bashiri, M. Skwarczynski, I. Toth, J. Maléth, I. Szilágyi

Confinement of triple-enzyme-involved antioxidant cascade in two-dimensional nanostructure

*ACS Materials Letters* 5 (2023) 565

B. Katana, K.P. Kókai, S. Sáringer, **A. Szerlauth**, D. Takács, I. Szilágyi

The influence of solvent and colloidal Particles on the efficiency of molecular antioxidants

*Antioxidants* 12 (2022) 99

M. Pavlovic, **A. Szerlauth**, S. Muráth, G. Varga, I. Szilágyi

Surface modification of two-dimensional layered double hydroxide nanoparticles with biopolymers for biomedical applications

*Advanced Drug Delivery Reviews* (2022) 114590

N.B. Alsharif, G.F. Samu, S. Sáringer, **A. Szerlauth**, D. Takács, V. Hornok, I. Dékány, I. Szilágyi

Antioxidant colloids via heteroaggregation of cerium oxide nanoparticles and latex beads

*Colloids and Surfaces B: Biointerfaces* 216 (2022) 112531

**A. Szerlauth**, L. Szalma, S. Muráth, S. Sáringer, G. Varga, L. Li, I. Szilágyi

Nanoclay-based sensor composites for the detection of molecular antioxidants

*Analyst* 147 (2022) 1367

**A. Szerlauth**, E. Balog, D. Takács, S. Sáringer, G. Varga, G. Schuszter, I. Szilágyi

Self-assembly of delaminated layered double hydroxide nanosheets for the recovery of lamellar structure

*Colloid and Interface Science Communications* 46 (2022) 100564

B. Katana, D. Takács, **A. Szerlauth**, S. Sáringer, G. Varga, A. Jamnik, F.D. Bobbink, P.J. Dyson, I. Szilágyi

Aggregation of halloysite nanotubes in the presence of multivalent ions and ionic liquids

*Langmuir* 37 (2021) 11869

D. Takács, B. Katana, **A. Szerlauth**, D. Sebők, M. Tomsic, I. Szilágyi

Influence of adsorption of ionic liquid constituents on the stability of layered double hydroxide colloids

*Soft Matter* 17 (2021) 9116

**A. Szerlauth**, S. Muráth, I. Szilágyi

Layered double hydroxide-based antioxidant dispersions of high colloidal and functional stability

*Soft Matter* 16 (2020) 10518

S. Muráth, **A. Szerlauth**, D. Sebok, I. Szilágyi

Layered Double Hydroxide Nanoparticles to Overcome the Hydrophobicity of Ellagic Acid: An Antioxidant Hybrid Material

*Antioxidants* 9 (2020) 153

**A. Szerlauth**, S. Muráth, S. Viski, I. Szilágyi

Radical scavenging activity of plant extracts from improved processing

*Heliyon* 5 (2019) e02763

S. Sáringi, R. A. Akula, **A. Szerlauth**, I. Szilágyi

Papain Adsorption on Latex Particles: Charging, Aggregation and Enzymatic Activity

*The Journal of Physical Chemistry B* 123 (2019) 9984

## Conferences

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**A. Szerlauth**, S. Varga, I. Szilágyi

Heterogenization of synergistic antioxidants on 2D nanoparticles

*12<sup>th</sup> International Colloids Conference*

Palma de Mallorca (Spain), 2023, poster presentation

**A. Szerlauth**, Á. Varga, T. Madácsy, J. Maléth, I. Szilágyi

Confinement of triple enzyme cascade in layered double hydroxide-based nanocomposites to prevent oxidative stress

*96<sup>th</sup> ACS Colloid and Surface Science Symposium*

Golden (Colorado, USA), 2022, oral presentation

**A. Szerlauth**, Á. Varga, T. Madácsy, J. Maléth, I. Szilágyi

Immobilization of antioxidant enzymes on layered double hydroxide nanosheets to prevent oxidative stress

*18<sup>th</sup> European Student Colloid Conference*

Szeged (Hungary), 2022, oral presentation

**A. Szerlauth**, A.A. Ádám, G. Varga, I. Szilágyi

Layered double hydroxide-based hybrid colloids for catalytic transfer hydrogenation

*11<sup>th</sup> International Colloids Conference*

Lisbon (Portugal), 2022, poster presentation

**A. Szerlauth**, E. Balog, D. Takács, S. Sáringi, G. Varga, G. Schuszter, I. Szilágyi

Aggregation study on restacking ability of layered double hydroxide nanosheets

*The 33<sup>rd</sup> Australian Colloid and Surface Science Student Conference*

Mawson Lakes (Australia), 2022, oral presentation (online)

**A. Szerlauth**, E. Balog, D. Takács, S. Sáringer, G. Varga, G. Schuszter, I. Szilágyi  
Aggregation study on the recovery of the lamellar structure of layered double hydroxides  
*35<sup>th</sup> Conference of the European Colloid & Interface Society*  
Athens (Greece), 2021, oral presentation (online)

**A. Szerlauth**, L. Szalma, S. Muráth, I. Szilágyi  
Paper-based antioxidant detection using the CUPRAC assay  
*ACS Spring 2021 Meeting – Macromolecules Chemistry: The Second Century*  
online, 2021, oral presentation (co-author)

**A. Szerlauth**, S. Muráth, I. Szilágyi  
Design of an efficient antioxidant composite of high functional and colloidal stability  
*Geneva Colloids*  
online, 2021, poster presentation

**A. Szerlauth**, S. Muráth, D. Sebők, I. Szilágyi  
Ellagsav alapú réteges kettős hidroxid hibridek antioxidáns aktivitása  
*XLII. Kémiai Előadói Napok*  
Szeged (Hungary), 2019, oral lecture

S. Muráth, **A. Szerlauth**, D. Kádár, D. Sebők, I. Szilágyi  
Immobilized antioxidants and their radical scavenging activity  
*257<sup>th</sup> American Chemical Society National Meeting and Exposition (Chemistry for New Frontiers)*  
Orlando (USA), 2019, poster co-author

## ***Scholarships***

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New National Excellence Program (2022/23)  
*Ministry for Culture and Innovation*

Tudományos Mecenatúra Pályázat (2021)  
*Ministry of Innovation and Technology*

Scholarship for Young National Talents (2021)  
*Ministry of Human Capacities*

## *Additional Information*

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Supramolecular and Colloid Chemistry and Physics for the Life Sciences

*Online summer school and workshop, 2020*

European Olympiad of Experimental Science (EOES)

Member of the organizing committee

*Szeged (Hungary), 2021 (online)*

European Student Colloid Conference

Member of the organizing committee

*Szeged (Hungary), 2022*