PERSONAL INFORMATION

Postal Address	***1 Rerrich Béla tér, H–6720 Szeged, Hungary***
Phone (Office & Mobile)	***+36 62 343255 & +36 30 5414822***
E–mail	***szistvan_at_chem.u-szeged.hu***
Web	***http://www2.sci.u-szeged.hu/physchem/bioc/***
ORCID	***https://orcid.org/0000-0001-7289-0979***

EDUCATION & DEGREES

5/2023	***DSc in Chemistry (Hungarian Academy of Sciences)***
4/2022	***Habilitation (University of Szeged)***
12/2017	***Habilitation & Privat Docent (University of Geneva)***
6/2006	***PhD in Chemistry (University of Szeged)***
1/2003	***MSc in Chemical Education (University of Szeged)***
6/2002	***MSc in Chemistry (University of Szeged)***

POSITIONS

1/2018 – present	***UNIVERSITY OF SZEGED (Szeged, Hungary)*** *Department of Physical Chemistry and Materials Science* ***Associate Professor & Assistant Professor (2018 – 2022)***
7/2009 – 12/2017	***UNIVERSITY OF GENEVA (Geneva, Switzerland)*** *Department of Inorganic, Analytical and Applied Chemistry* ***Lecturer & Postdoctoral Research Associate (2009 – 2012)***
8/2006 – 6/2009	***MURDOCH UNIVERSITY (Perth, Australia)*** *School of Chemical and Mathematical Sciences* ***Postdoctoral Research Fellow***
1/2006 – 7/2006	***UNIVERSITY OF SZEGED (Szeged, Hungary)*** *HAS Bioinorganic Chemistry Research Group* ***Research Fellow***
9/2005 – 12/2005	***UNIVERSITY OF TURKU (Turku, Finland)*** *Department of Chemistry* ***Visitor Research Fellow***
9/2002 – 8/2005	***UNIVERSITY OF SZEGED (Szeged, Hungary)*** *Department of Inorganic and Analytical Chemistry* ***PhD student***

LANGUAGE

Hungarian – Native ***English – Fluent*** ***French – Intermediate***

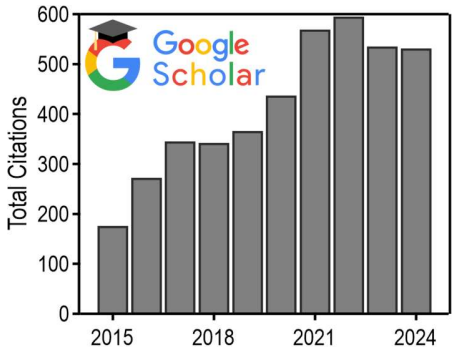
RESEARCH INTEREST KEYWORDS

Colloids and interfaces, Materials chemistry, Nanozymes, Antioxidants, Polyelectrolytes, Nanoplastics, Per- and polyfluoroalkyl substances, Particle aggregation & Ionic liquids

CURRICULUM VITAE

ISTVÁN SZILÁGYI

SCIENTIFIC DATA



Peer-reviewed papers	***144***
Corresponding Author	*77*
First Author	*18*
Cumulative Impact Factor	***611.2***
Total Citations	***~4500***
Independent	***~4000***
Scientific Lectures	***73***
Invited/Keynote	*32*
H-Index (all citations included)	***39***

TEACHING & MENTORING ACTIVITY

2009 – 2014	***Analytical chemistry laboratory practice and exercise for BSc students***
2012 – 2017	***Advanced analytical and instrumental chemistry lecture for MSc students***
2012 –	***General chemistry laboratory practice for undergraduate students***
2018 –	***Physical chemistry laboratory practice for BSc students***
2018 –	***Nanoparticle dispersions lecture for PhD students***
2019 –	***Interfaces and nanostructures lecture for MSc students***
2022 –	***General chemistry lecture for BSc students***
2014 –	***Supervision of 5 postdoctoral fellows as well as 11 PhD students***

MEMBERSHIPS & AWARDS

President of the Geneva's Applied Physical and Analytical Chemistry Association
Vice-Head of the Chemistry Institute of the University of Szeged
Secretary of the Hungarian Chemical Society - Group of Csongrád County
Management Committee Member of the COST Actions CM1206 & MP1106
Member of the Société Académique de Genève
Member of the Hungarian, Swiss & American Chemical Society
Member of the European Colloid and Interface Society
Elected Member of the Council of the Faculty of Science and Informatics
Scientific Award of the Faculty of Science and Informatics, University of Szeged
Presentation Award at the Scientific Student Conference at the University of Szeged
Young Investigator Award of the Hungarian Academy of Science
Member of the International Association of Colloid and Interface Scientists

INDEPENDENT RESEARCH FUNDING (as PI)

03/2014 – 12/2017	***Swiss National Science Foundation (200021_150162) – 289 065 CHF***
02/2016 – 10/2017	***Swiss COST/SERI Office (C15.0024) – 179 735 CHF***
01/2018 – 12/2022	***HAS/ELNR "Momentum" Starting Grant – 200 000 000 HUF***
12/2019 – 11/2022	***NRDI Office Regular Research Grant (131558) – 35 910 000 HUF***
12/2022 – 11/2027	***HAS "Momentum" Advanced Grant – 286 000 000 HUF***
01/2023 – 12/2025	***NRDI Office Regular Research Grant (142258) – 35 880 000 HUF***
03/2023 – 02/2027	***Horizon Europe MSCA SE "ENSIGN" (101086226) – 161 000 EUR***
12/2024 – 11/2027	***NRDI HU-Rizont International Cooperative Grant – 400 000 000 HUF***

CURRICULUM VITAE

ISTVÁN SZILÁGYI

PEER–REVIEWED ARTICLES

144. Kónya D. Zsuzsanna, Adél Szerlauth, **Istvan Szilagyi**
Bionanocomposite of dual antioxidant and protease function by co-immobilization of tannic acid and papain on anionic clays
Chemistry - A European Journal e202500846 (2025)

143. Katalin Viktória Bere, Zsolt Csenki-Bakos, Edit Kaszab, Béla Urbányi, István Szabó, **Istvan Szilagyi**
Correlation between the stability and toxicity of PFAS-nanoplastic colloids
Environmental Science: Nano **12**, 1821 (2025)

142. Helga Tóth Ugyonka, György Hantal, **Istvan Szilagyi**, Abdenacer Idrissi, Miguel Jorge, Pál Jedlovszky
The surface of imidazolium-based ionic liquids consists of two interfaces
Journal of Physical Chemistry Letters **16**, 1873 (2025)

141. Helga Tóth Ugyonka, György Hantal, **Istvan Szilagyi**, Abdenacer Idrissi, Miguel Jorge, Pál Jedlovszky
Single particle dynamics at the free surface of imidazolium-based ionic liquids
Journal of Physical Chemistry B **129**, 579 (2025)

140. Katalin Bere, Bálint Bakk, Erzsébet Illés, Marianna Kocsis, Andrej Jamnik, Matija Tomsic, **Istvan Szilagyi**
Role of fluorocarbon chain length in the adsorption of perfluoroalkyl substances on nanoplastic particles
ACS ES&T Water **4**, 5114 (2024)

139. Attila Voros, Tibor G. Halmagyi, Szilárd Sáringer, Viktória Hornok, **Istvan Szilagyi**
Papain functionalized Prussian blue nanozyme colloids of triple enzymatic function
Chemical Communications **60**, 13032 (2024)

138. Tibor G. Halmagyi, Attila Voros, Szilard Saringer, Viktoria Hornok, Nora V May, Gergely F Samu, Imre Szenti, Adel Szerlauth, Zoltan Konya, **Istvan Szilagyi**
Coamplified nanozyme cocktails for cascade reaction-driven antioxidant treatments
ACS Applied Materials & Interfaces **16**, 54485 (2024)

137. Szilárd Sáringer, Gergő Terjéki, Árpád Varga, József Maléth, **Istvan Szilagyi**
Optimization of interfacial properties improved the stability and activity of the catalase enzyme immobilized on plastic nanobeads
Langmuir **31**, 16338 (2024)

136. Tibor G Halmagyi, Laila Noureen, Adel Szerlauth, **Istvan Szilagyi**
Engineering inorganic nanozyme architectures for decomposition of reactive oxygen species
Dalton Transactions **53**, 14132 (2024)

135. Bojana Katana, João Baptista, Ricardo Schneider, Rodrigo José de Oliveira, **Istvan Szilagyi**
The impact of polyphosphates on the colloidal stability of laponite particles
Journal of Physical Chemistry B **128**, 6957 (2024)

134. Helga Tóth Ugyonka, György Hantal, **Istvan** Szilagyi, Abdenacer Idrissi, Miguel Jorge, Pál Jedlovszky
Spatial organization of the ions at the free surface of imidazolium-based ionic liquids
Journal of Colloid and Interface Science **676**, 989 (2024)

133. Adel Szerlauth, Tamara Madácsy, Gergely F. Samu, Péter Bíró, Miklós Erdélyi, Gábor Varga, Zhi Ping Xu, József Maléth, **Istvan Szilagyi**
Reduction of intracellular oxidative stress with a copper-incorporated layered double hydroxide
Chemical Communications **60**, 1325 (2024)

132. Zsófia Vargáné Árok, Szilárd Sáringer, Gréta Papp, Ádám Juhász, Sándor Puskás, **Istvan Szilagyi**
Ion-specific effects on the structure, size, and charge of polymers applied in enhanced oil recovery
Energy & Fuels **38**, 6798 (2024)

131. Tamás Péter, Dóra Takács, Szilárd Sáringer, Adél Szerlauth, Kadosa Sajdik, Gábor Galbács, Matija Tomsic, Samuel Shaw, Katherine Morris, Grant Douglas, **Istvan Szilagyi**
Interaction between uranyl cations and layered double hydroxide nanoparticles: Implications for nuclear wastewater management
ACS ES&T Water **4**, 3059 (2024)

130. Tibor Halmágyi, Nizar B. Alsharif, Mohamed A. Berkal, Mark A. Hempenius, **Istvan Szilagyi,** G. Julius Vancso, Corinne Nardin
Aptamer clicked poly(ferrocenylsilanes) at Au nanoparticles as platforms with multiple function
Chemistry - A European Journal **30**, e202303979 (2024)

129. Adél Szerlauth, Szilárd Varga, **Istvan Szilagyi**
Molecular antioxidants maintain synergistic radical scavenging activity upon co-immobilization on clay nanoplatelets
ACS Biomaterials Science & Engineering **9**, 5622 (2023)

128. Dóra Takács, Tamás Szabó, Andrej Jamnik, Matija Tomsic, **Istvan Szilagyi**
Colloidal interactions of microplastic particles with anionic clays in electrolyte solutions
Langmuir **39**, 12835 (2023)

127. Nizar B. Alsharif, Dániel Viczián, Aleksandra Szczes, **Istvan Szilagyi**
Formulation of antioxidant composites by controlled heteroaggregation of cerium oxide and manganese oxide nanozymes
Journal of Physical Chemistry C **127**, 17201 (2023)

126. Nizar B. Alsharif, Tibor Halmágyi, Mark A. Hempenius, G. Julius Vancso, Corinne Nardin, **Istvan Szilagyi**
Dual functionality of ferrocene-based metallopolymers as radical scavengers and nanoparticle stabilizing agents
Nanoscale **15**, 11875 (2023)

125. Katalin Bere, Xiong Xiong, Szilárd Sáringer, Grant Douglas, **Istvan Szilagyi**
Microplastics as an adsorption and transport medium for per- and polyfluoroalkyl substances in aquatic systems: polystyrene and undecafluorohexanoic acid interactions
Journal of Molecular Liquids **384**, 122285 (2023)

124. Zsófia Vargáné Árok, Szilárd Sáringer, Dóra Takács, Coline Bretz, Ádám Juhász, **Istvan Szilagyi**
Effect of salinity on solution properties of a partially hydrolyzed polyacrylamide
Journal of Molecular Liquids **384**, 122192 (2023)

123. Adel Szerlauth, Árpád Varga, Tamara Madácsy, Dániel Sebők, Sahra Bashiri, Mariusz Skwarczynski, Istvan Toth, József Maléth, **Istvan Szilagyi**
Confinement of triple-enzyme-involved antioxidant cascade in two-dimensional nanostructure
ACS Materials Letters **5**, 565 (2023)

122. Bojana Katana, Kata Panna Kókai, Szilárd Sáringer, Adél Szerlauth, Dóra Takács, **Istvan Szilagyi**
The Influence of solvents and colloidal particles on the efficiency of molecular antioxidants
Antioxidants **12**, 99 (2023)

121. Adél Szerlauth, Zsuzsanna D. Kónya, Gréta Papp, Zoltán Kónya, Ákos Kukovecz, Márton Szabados, Gábor Varga, **Istvan Szilagyi**
Molecular orientation rules the efficiency of immobilized antioxidants
Journal of Colloid and Interface Science **632**, 260 (2023)

120. Dóra Takács, Gábor Varga, Edit Csapó, Andrej Jamnik, Matija Tomsic, **Istvan Szilagyi**
Delamination of layered double hydroxide in ionic liquids under ambient conditions
Journal of Physical Chemistry Letters **13**, 11850 (2022)

119. Marko Pavlovic, Adél Szerlauth, Szabolcs Muráth, Gábor Varga, **Istvan Szilagyi**
Surface modification of two-dimensional layered double hydroxide nanoparticles with biopolymers for biomedical applications
Advanced Drug Delivery Reviews **191**, 114590 (2022)

118. Dóra Takács, Tamás Péter, Zsófia Vargáné Árok, Bojana Katana, Snežana Papović, Slobodan Gadzuric, Milan Vraneš, **Istvan Szilagyi**
Structure-stability relationship in aqueous colloids of latex particles and gemini surfactants
Journal of Physical Chemistry B **126**, 9095 (2022)

117. Nizar B. Alsharif, Gergely F. Samu, Szilárd Sáringer, Adél Szerlauth, Dóra Takács, Viktoria Hornok, Imre Dékány, **Istvan Szilagyi**
Antioxidant colloids via heteroaggregation of cerium oxide nanoparticles and latex beads
Colloids and Surfaces B: Biointerfaces **216**, 112531 (2022)

116. Adél Szerlauth, Lilla Szalma, Szabolcs Muráth, Szilárd Sáringer, Gábor Varga, Li Li, **Istvan Szilagyi**
Nanoclay-based sensor composites for the facile detection of molecular antioxidants
Analyst **147**, 1367 (2022)

115. Bojana Katana, Gábor Varga, Nóra V. May, **Istvan Szilagyi**
Superoxide dismutase mimicking nanocomposites based on immobilization of metal complexes on nanotubular carriers
Journal of Molecular Structure **1256**, 132492 (2022)

114. Dóra Takács, Matija Tomsic, **Istvan Szilagyi**
Effect of water and salt on the colloidal stability of latex particles in ionic liquid solutions
Colloids and Interfaces **6**, 2 (2022)

113. Adél Szerlauth, Edina Balog, Dóra Takács, Szilárd Sáringer, Gábor Varga, Gábor Schuszter, **Istvan Szilagyi**
Self-assembly of delaminated layered double hydroxide nanosheets for the recovery of lamellar structure
Colloids and Interface Science Communications **46**, 100564 (2022)

112. Szilárd Sáringer, Tamás Valtner, Árpád Varga, József Maléth, **István Szilagyi**
Development of polymer-based multifunctional composite particles of protease and peroxidase activities
Journal of Materials Chemistry B **10**, 2523 (2022)

111. Dóra Takács, Bojana Katana, Adél Szerlauth, Dániel Sebők, Matija Tomsic, **Istvan Szilagyi**
Influence of adsorption of ionic liquid constituents on the stability of layered double hydroxide colloids
Soft Matter **17**, 9116 (2021)

110. Bojana Katana, Dóra Takács, Adél Szerlauth, Szilárd Sáringer, Gábor Varga, Andrej Jamnik, Felix D. Bobbink, Paul J. Dyson, **Istvan Szilagyi**
Aggregation of halloysite nanotubes in the presence of multivalent ions and ionic liquids
Langmuir **37**, 11869 (2021)

109. Ditta Ungor, **Istvan Szilagyi**, Edit Csapó
Yellow-emitting Au/Ag bimetallic nanoclusters with high photostability for detection of folic acid
Journal of Molecular Liquids **338**, 116695 (2021)

108. Nizar B. Alsharif, Katalin Bere, Szilárd Sáringer, Gergely F. Samu, Dóra Takács, Viktória Hornok, **Istvan Szilagyi**
Design of hybrid biocatalysts by controlled heteroaggregation of manganese oxide and sulfate latex particles to combat reactive oxygen species
Journal of Materials Chemistry B **9**, 4929 (2021)

107. Nizar B. Alsharif, Szabolcs Muráth, Bojana Katana, **Istvan Szilagyi**
Composite materials based on heteroaggregated particles: Fundamentals and applications
Advances in Colloid and Interface Science **294**, 102456 (2021)

106. Lívia Vásárhelyi, Tímea Hegedűs, Szilárd Sáringer, Gergő Ballai, **Istvan Szilagyi**, Zoltán Kónya
Stability of boron nitride nanosphere dispersions in the presence of polyelectrolytes
Langmuir **37**, 5399 (2021)

105. Jure Cerar, Andrej Jamnik, **Istvan Szilagyi**, Matija Tomsic
Solvation of nonionic poly(ethylene oxide) surfactant Brij 35 in organic and aqueous-organic solvents
Journal of Colloid and Interface Science **594**, 150 (2021)

104. Marko Pavlovic, Szabolcs Muráth, Xénia Katona, Paul Rouster, Nizar B. Alsharif, József Maléth, **Istvan Szilagyi**
Nanocomposite-based dual enzyme system for broad-spectrum scavenging of reactive oxygen species
Scientific Reports **11**, 4321 (2021)

103. Tímea Hegedűs, Dóra Takács, Lívia Vásárhelyi, **Istvan Szilagyi**, Zoltán Kónya
Specific ion effects on aggregation and charging properties of boron nitride nanospheres
Langmuir **37**, 2466 (2021)

102. Zoltán Somosi, Nóra V. Nagy, Dániel Sebők, István Pálinkó, **Istvan Szilagyi**
Catalytic antioxidant nanocomposites based on sequential adsorption of redox active metal complexes and polyelectrolytes on nanoclay particles
Dalton Transactions **50**, 2426 (2021)

101. Hye Won Jeong, Wu Haihua, Gergely F. Samu, Paul Rouster, **Istvan Szilagyi**, Hyunwoong Park, Csaba Janáky
The effect of nanostructure dimensionality on the photoelectrochemical properties of derived TiO_2 films
Electrochimica Acta **373**, 137900 (2021)

100. Szilárd Sáringer, Paul Rouster, **Istvan Szilagyi**
Co-immobilization of antioxidant enzymes on titania nanosheets for reduction of oxidative stress in colloid systems
Journal of Colloid and Interface Science **590**, 28 (2021)

99. Gábor Varga, Zoltán Somosi, Zoltán Kónya, Ákos Kukovecz, István Pálinkó, **Istvan Szilagyi**
A colloid chemistry route for the preparation of hierarchically ordered mesoporous layered double hydroxides using surfactants as sacrificial templates
Journal of Colloid and Interface Science **581**, 928 (2021)

98. Bojana Katana, Dóra Takács, Edit Csapó, Tamás Szabó, Andrej Jamnik, **Istvan Szilagyi**
Ion specific effects on the stability of halloysite nanotube colloids-Inorganic salts versus ionic liquids
Journal of Physical Chemistry B **124**, 9757 (2020)

97. Bojana Katana, Dóra Takács, Felix D. Bobbink, Paul Dyson, Nizar B. Alsharif, Matija Tomsic, **Istvan Szilagyi**
Masking specific effects of ionic liquid constituents at the solid-liquid interface by surface functionalization
Physical Chemistry Chemical Physics **22**, 24764 (2020)

96. Adél Szerlauth, Szabolcs Muráth, **Istvan Szilagyi**
Layered double hydroxide-based antioxidant dispersions of high colloidal and functional stability
Soft Matter **16**, 10518 (2020)

95. Gregor Trefalt, **Istvan Szilagyi**, Michal Borkovec
Schulze-Hardy rule revisited
Colloid and Polymer Science **298**, 961 (2020)

94. Marco Galli, Szilárd Sáringer, **Istvan Szilagyi**, Gregor Trefalt
A simple method to determine critical coagulation concentration from electrophoretic mobility
Colloids and Interfaces **4**, 20 (2020)

93. Nizar B. Alsharif, Gergely F. Samu, Szilárd Sáringer, Szabolcs Muráth, **Istvan Szilagyi**
A colloid approach to decorate latex particles with Prussian blue nanozymes
Journal of Molecular Liquids **309**, 113066 (2020)

92. Szabolcs Muráth, Nizar B. Alsharif, Szilárd Sáringer, Bojana Katana, Zoltán Somosi, **Istvan Szilagyi**
Antioxidant materials based on 2D nanostructures: A review on recent progresses
Crystals **10**, 148 (2020)

91. Szabolcs Muráth, Adél Szerlauth, Gábor Varga, Dániel Sebők, **Istvan Szilagyi**
Layered double hydroxide nanoparticles to overcome the hydrophobicity of ellagic acid: An antioxidant hybrid material
Antioxidants **9**, 153 (2020)

90. Carlos Franco, David Rodríguez-San-Miguel, Alessandro Sorrenti, Semih Sevim, Ramon Pons, Ana E. Platero-Prats, Marko Pavlovic, **Istvan Szilagyi**, M. Luisa Ruiz Gonzalez, José M. González-Calbet, Davide Bochicchio, Luca Pesce,

Giovanni M. Pavan, Inhar Imaz, Mary Cano-Sarabia, Daniel Maspoch, Salvador Pané, Andrew de Mello, Felix Zamora, Josep Puigmartí-Luis
Biomimetic synthesis of sub-20 nanometer covalent organic frameworks in water
Journal of the American Chemical Society **142**, 3540 (2020)

89. Bojana Katana, Paul Rouster, Gábor Varga, Szabolcs Muráth, Karine Glinel, Alain M. Jonas, **Istvan Szilagyi**
Self-assembly of protamine biomacromolecule on halloysite nanotubes for immobilization of superoxide dismutase enzyme
ACS Applied Bio Materials **3**, 522 (2020)

88. Tamas Szabó, Plinio Maroni, **Istvan Szilagyi**
Size-dependent aggregation of graphene oxide
Carbon **160**, 145 (2020)

87. Snezana Papovic, Milan Vranes, Aleksandar Tot, **Istvan Szilagyi**, Bojana Katana, Khalaf Alenezi, Slobodan Gadzuric
Physicochemical investigations of a binary mixture containing ionic liquid 1-butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide and diethyl carbonate
Journal of Chemical & Engineering Data **65**, 68 (2020)

86. Zoltán Somosi, Szabolcs Muráth, Péter Nagy, Dániel Sebők, **Istvan Szilagyi**, Grant Douglas
Contaminant removal by efficient separation of in-situ formed layered double hydroxide compounds from mine wastewaters
Environmental Science: Water Research & Technology **5**, 2251 (2019)

85. Szilárd Sáringer, Rita Akula Achieng, Adél Szerlauth, **Istvan Szilagyi**
Papain adsorption on latex particles: Charging, aggregation and enzymatic activity
Journal of Physical Chemistry B **123**, 9984 (2019)

84. Adél Szerlauth, Szabolcs Muráth, Sándor Viski, **Istvan Szilagyi**
Radical scavenging activity of plant extracts from improved processing
Heliyon **5**, 02763 (2019)

83. Xiao Di Sun Zhou, Robert Marzke, Zihui Peng, **Istvan Szilagyi**, Sandwip K. Dey
Understanding the high longitudinal relaxivity of Gd(DTPA)-intercalated (Zn,Al)-layered double hydroxide nanoparticles
Inorganic Chemistry **58**, 12112 (2019)

82. **Istvan Szilagyi**
Layered double hydroxide-based nanomaterials-From fundamentals to applications
Nanomaterials **9**, 1174 (2019)

81. Milan Vraneš, Nikola Cvjetićanin, Snežana Papović, Marko Pavlović, **Istvan Szilagyi**, Slobodan Gadžurić
Electrochemical study of anatase TiO_2 nanotube array electrode in electrolyte based on 1,3-diethylimidazolium bis(trifluoromethylsulfonyl)imide ionic liquid
Ionics **25**, 5501 (2019)

80. Paul Rouster, Marko Pavlovic, Tianchi Cao, Bojana Katana, **Istvan Szilagyi**
Stability of titania nanomaterials dispersed in aqueous solutions of ionic liquids of different alkyl chain lengths
Journal of Physical Chemistry C **123**, 12966 (2019)

79. Szilárd Sáringer, Paul Rouster, **Istvan Szilagyi**
Regulation of the stability of titania nanosheet dispersions with oppositely and like-charged polyelectrolytes
Langmuir **35**, 4986 (2019)

78. Szabolcs Muráth, Márton Szabados, Dániel Sebők, Ákos Kukovecz, Zoltán Kónya, **Istvan Szilagyi**, Pál Sipos, István Pálinkó
Influencing the texture and morphological properties of layered double hydroxides with the most diluted solvent mixtures – the effect of 6-8 carbon alcohols and temperature
Colloids and Surfaces A: Physicochemical and Engineering Aspects **574**, 146 (2019)

77. Marko Pavlovic, Bálint Náfrádi, Paul Rouster, Szabolcs Muráth, **Istvan Szilagyi**

Highly stable enzyme-mimicking nanocomposite of antioxidant activity
Journal of Colloid and Interface Science **543**, 174 (2019)

76. Zoltan Somosi, Marko Pavlovic, Istvan Palinko, **Istvan Szilagyi**
Effect of polyelectrolyte mono- and bilayer formation on the colloidal stability of layered double hydroxide nanoparticles
Nanomaterials **8**, 986 (2018)

75. Szabolcs Muráth, Szilárd Sáringer, Zoltán Somosi, **Istvan Szilagyi**
Effect of ionic compounds of different valences on the stability of titanium oxide colloids
Colloids and Interfaces **2**, 32 (2018)

74. Paul Rouster, Marko Pavlovic, Szilárd Sáringer, **Istvan Szilagyi**
Functionalized titania nanosheet dispersions of peroxidase activity
Journal of Physical Chemistry C **122**, 11455 (2018)

73. Samuel Pearson, Marko Pavlovic, Thomas Auge, Valerian Torregrossa, **Istvan Szilagyi**, Franck D'Agosto, Muriel Lansalot, Elodie Bourgeat-Lami, Vanessa Prevot
Controlling the morphology of film-forming, nanocomposite latexes containing layered double hydroxide by RAFT-mediated emulsion polymerization
Macromolecules **51**, 3953 (2018)

72. Takuya Sugimoto, Tianchi Cao, **Istvan Szilagyi**, Michal Borkovec, Gregor Trefalt
Aggregation and charging of sulfate and amidine latex particles in the presence of oxyanions
Journal of Colloid and Interface Science **524**, 456 (2018)

71. Marko Pavlovic, Paul Rouster, Zoltán Somosi, **Istvan Szilagyi**
Horseradish peroxidase-nanoclay hybrid particles of high functional and colloidal stability
Journal of Colloid and Interface Science **524**, 121 (2018)

70. Mohsen Moazzami-Gudarzi, Pavel Adam, Alexander M. Smith, Gregor Trefalt, **Istvan Szilagyi**, Plinio Maroni, Michal Borkovec
Interactions between similar and dissimilar charged interfaces in the presence of multivalent anions
Physical Chemistry Chemical Physics **20**, 9436 (2018)

69. Paul Rouster, Marko Pavlovic, **Istvan Szilagyi**
Immobilization of Superoxide Dismutase on polyelectrolyte functionalized titania nanosheets
ChemBioChem **19**, 404 (2018)

68. Paul Rouster, Marko Pavlovic, Endre Horváth, László Forró, Sandwip K. Dey, **Istvan Szilagyi**
Influence of protamine functionalization on the colloidal stability of 1D and 2D titanium oxide nanostructures
Langmuir **33**, 9750 (2017)

67. Marko Pavlovic, Paul Rouster, **Istvan Szilagyi**
Synthesis and formulation of functional bionanomaterials with superoxide dismutase activity
Nanoscale **9**, 369 (2017)

66. M. Ádok-Sipiczki, **I. Szilagyi**, I. Palinko, M. Pavlovic, P. Sipos, C. Nardin
Design of nucleic acid-layered double hydroxide nanohybrids
Colloid and Polymer Science **295**, 1463 (2017)

65. Paul Rouster, Marko Pavlovic, **Istvan Szilagyi**
Destabilization of titania nanosheet suspensions by inorganic salts: Hofmeister series and Schulze-Hardy rule
Journal of Physical Chemistry B **121**, 6749 (2017)

64. Tianchi Cao, Takuya Sugimoto, **Istvan Szilagyi**, Gregor Trefalt, Michal Borkovec
Heteroaggregation of oppositely charged particles in the presence of multivalent ions
Physical Chemistry Chemical Physics **19**, 15160 (2017)

63. Marko Pavlovic, Paul Rouster, Elodie Bourgeat-Lami, Vanessa Prevot, **Istvan Szilagyi**
Design of latex-layered double hydroxide composites by tuning the aggregation in suspensions

Soft Matter **13**, 842 (2017)

62. Gregor Trefalt, **Istvan Szilagyi**, Gabriel Tellez, Michal Borkovec
Colloidal stability in asymmetric electrolytes: modifications of the Schulze-Hardy rule
Langmuir **33**, 1695 (2017)

61. Marko Pavlovic, Paul Rouster, Tamas Oncsik, **Istvan Szilagyi**
Tuning colloidal stability of layered double hydroxides: from monovalent ions to polyelectrolytes
ChemPlusChem **82**, 121 (2017)

60. Paul Rouster, Marko Pavlovic, **Istvan Szilagyi**
Improving the stability of titania nanosheets by functionalization with polyelectrolytes
RSC Advances **6**, 97322 (2016)

59. Marko Pavlovic, Robin Huber, Monika Adok-Sipiczki, Corinne Nardin, **Istvan Szilagyi**
Ion specific effects on the stability of layered double hydroxide colloids
Soft Matter **12**, 424 (2016)

58. Marko Pavlovic, Li Li, Francois Dits, Zi Gu, Monika Adok-Sipiczki, **Istvan Szilagyi**
Aggregation of layered double hydroxide nanoparticles in the presence of heparin: towards highly stable delivery systems
RSC Advances **6**, 16159 (2016)

57. Tamas Oncsik, Anthony Désert, Gregor Trefalt, Michal Borkovec, **Istvan Szilagyi**
Charging and aggregation of latex particles in aqueous solutions of ionic liquids: Towards an extended Hofmeister series
Physical Chemistry Chemical Physics **18**, 7511 (2016)

56. Xiaojiang Xie, **Istvan Szilagyi**, Jingying Zhai, Lu Wang, Eric Bakker
Ion-selective optical nanosensors based on solvatochromic dyes of different lipophilicity: from bulk partitioning to interfacial accumulation
ACS Sensors **1**, 516 (2016)

55. Mohsen Moazzami-Gudarzi, Gregor Trefalt, **Istvan Szilagyi**, Plinio Maroni, Michal Borkovec
Nanometer-ranged attraction induced by multivalent ions between similar and dissimilar surfaces probed by the atomic force microscope (AFM)
Physical Chemistry Chemical Physics **18**, 8739 (2016)

54. Marko Pavlovic, Monika Adok-Sipiczki, Corinne Nardin, Samuel Pearson, Elodie Bourgeat-Lami, Vanessa Prevot, **Istvan Szilagyi**
Effect of macroRAFT copolymer adsorption on the colloidal stability of layered double hydroxide nanoparticles
Langmuir **31**, 12609 (2015)

53. Marko Pavlovic, Monika Adok-Sipiczki, Endre Horvath, Tamas Szabo, Laszlo Forro, **Istvan Szilagyi**
Dendrimer-stabilized titanate nanowire dispersions as potential nanocarriers
Journal of Physical Chemistry C **119**, 24919 (2015)

52. Tamás Oncsik, Gregor Trefalt, Michal Borkovec, **Istvan Szilagyi**
Specific ion effects on particle aggregation induced by monovalent salts within the Hofmeister series
Langmuir **31**, 3799 (2015)

51. Tamas Szabo, Viktor Tóth, Endre Horvath, Laszlo Forro, **Istvan Szilagyi**
Tuning the aggregation of titanate nanowires in aqueous dispersions
Langmuir **31**, 42 (2015)

50. Xiaojiang Xie, Agustín Gutiérrez, Valentin Trofimov, **Istvan Szilagyi**, Thierry Soldati, Eric Bakker
Potassium sensitive optical nanosensors containing voltage sensitive dyes
Chimia **69**, 196 (2015)

49. Tianchi Cao, **Istvan Szilagyi**, Tamas Oncsik, Michal Borkovec, Gregor Trefalt
Aggregation of colloidal particles in the presence of multivalent coions: the inverse Schulze-Hardy rule
Langmuir **31**, 6610 (2015)

48. Mohsen Moazzami Gudarzi, Gregor Trefalt, **Istvan Szilagyi**, Plinio Maroni, Michal Borkovec
Forces between negatively charged Interfaces in the presence of cationic multivalent oligoamines measured with the atomic force microscope
Journal of Physical Chemistry C **119**, 15482 (2015)

47. Thi Nhu Y Hoang, Zheng Wang, Lucille Babel, Homayoun Nozary, Michal Borkovec, **Istvan Szilagyi**, Claude Piguet
Metal loading of lanthanidopolymers driven by positive cooperativity
Dalton Transactions **44**, 13250 (2015)

46. Xiaojiang Xie, Agustin Gutierrez, Valentin Trofimov, **Istvan Szilagyi**, Thierry Soldati, Eric Bakker
Charged Solvatochromic Dyes as Signal Transducers in pH Independent Fluorescent and Colorimetric Ion Selective Nanosensors
Analytical Chemistry **87**, 9954 (2015)

45. F. Javier Montes Ruiz–Cabello, Gregor Trefalt, Tamas Oncsik, **Istvan Szilagyi**, Plinio Maroni, Michal Borkovec
Interaction Forces and Aggregation Rates of Colloidal Latex Particles in the Presence of Monovalent Counterions
Journal of Physical Chemistry B **119**, 8184 (2015)

44. Tamas Szabo, Viktor Toth, Endre Horvath, **Istvan Szilagyi**
Formulation of multifunctional material dispersions
Chimia **68**, 454 (2014)

43. **Istvan Szilagyi**, Tamas Szabo, Anthony Desert, Gregor Trefalt, Tamas Oncsik, Michal Borkovec
Particle aggregation mechanisms in ionic liquids
Physical Chemistry Chemical Physics **16**, 9515 (2014)

42. Endre Horvath, Lucie Grebikova, Plinio Maroni, Tamás Szabo, Arnaud Magrez, Laszlo Forro, **Istvan Szilagyi**
Dispersion characteristics and aggregation in titanate nanowire colloids
ChemPlusChem **79**, 592 (2014)

41. Xiaojiang Xie, Gastón A. Crespo, Jingying Zhai, **Istvan Szilagyi**, Eric Bakker
Potassium–selective optical microsensors based on surface modified polystyrene microspheres
Chemical Communications **50**, 4592 (2014)

40. **Istvan Szilagyi**, Gregor Trefalt, Alberto Tiraferri, Plinio Maroni, Michal Borkovec
Polyelectrolyte adsorption, interparticle forces, and colloidal aggregation
Soft Matter **10**, 2479 (2014)

39. Endre Horvath, **Istvan Szilagyi**, Laszlo Forro, Arnaud Magrez
Probing titanate nanowire surface acidity through methylene blue adsorption in colloidal suspension and on thin films
Journal of Colloid and Interface Science **416**, 190 (2014)

38. Marco Finessi, **Istvan Szilagyi**, Plinio Maroni
Dendrimer induced interaction forces between colloidal particles revealed by direct force and aggregation measurements
Journal of Colloid and Interface Science **417**, 346 (2014)

37. Tamas Oncsik, Gregor Trefalt, Zita Csendes, **Istvan Szilagyi**, Michal Borkovec
Aggregation of negatively charged colloidal particles in the presence of multivalent cations
Langmuir **30**, 733 (2014)

36. Gregor Trefalt, **Istvan Szilagyi**, Tamas Oncsik, Amin Sadeghpour, Michal Borkovec
Probing colloidal particle aggregation by light scattering
Chimia **67**, 772 (2013)

35. F. Javier Montes Ruiz–Cabello, Gregor Trefalt, Zita Csendes, Prashant Sinha, Tamas Oncsik, **Istvan Szilagyi**, Plinio Maroni, Michal Borkovec
Predicting aggregation rates of colloidal particles from direct force measurements
Journal of Physical Chemistry B **117**, 11853 (2013)

34. Gregor Trefalt, **Istvan Szilagyi**, Michal Borkovec
Poisson–Boltzmann description of interaction forces and aggregation rates involving charged colloidal particles in asymmetric electrolytes
Journal of Colloid and Interface Science **406**, 111 (2013)

33. Prashant Sinha, **Istvan Szilagyi**, F. Javier Montes Ruiz–Cabello, Plinio Maroni, Michal Borkovec
Attractive forces between charged colloidal particles induced by multivalent ions revealed by confronting aggregation and direct force measurements
Journal of Physical Chemistry Letters **4**, 648 (2013)

32. **Istvan Szilagyi**, Anna Polomska, Damien Citherlet, Amin Sadeghpour, Michal Borkovec
Charging and aggregation of negatively charged colloidal latex particles in the presence of multivalent oligoamine cations
Journal of Colloid and Interface Science **392**, 34 (2013)

31. **Istvan Szilagyi**, Amin Sadeghpour, Michal Borkovec
Destabilization of colloidal suspensions by multivalent ions and polyelectrolytes: from screening to overcharging
Langmuir **28**, 6211 (2012)

30. Michal Borkovec, **Istvan Szilagyi**, Ionel Popa, Marco Finessi, Prashant Sinha, Plinio Maroni, Georg Papastavrou
Investigating forces between charged particles in the presence of oppositely charged polyelectrolytes with the multi–particle colloidal probe technique
Advances in Colloid and Interface Science **179–182**, 85 (2012)

29. Amin Sadeghpour, **Istvan Szilagyi**, Michal Borkovec
Charging and aggregation of positively charged colloidal latex particles in presence of multivalent polycarboxylate anions
Zeitschrift für Physikalische Chemie **226**, 597 (2012)

28. Prashant Sinha, Ionel Popa, Marco Finessi, Francisco Javier Montes Ruiz–Cabello, **Istvan Szilagyi**, Plinio Maroni, Michal Borkovec
Exploring forces between individual colloidal particles with the atomic force microscope
Chimia **66**, 214 (2012)

27. **Istvan Szilagyi**, Dana Rosická, José Hierrezuelo, Michal Borkovec
Charging and stability of anionic latex particles in the presence of linear poly(ethylene imine)
Journal of Colloid and Interface Science **360**, 580 (2011)

26. Amin Sadeghpour, Emek Seyrek, **Istvan Szilagyi**, José Hierrezuelo, Michal Borkovec
Influence of the ionization degree and molecular mass of weak polyelectrolytes on charging and stability behavior of oppositely charged colloidal particles
Langmuir **27**, 9270 (2011)

25. Marco Finessi, Prashant Sinha, **Istvan Szilagyi**, Ionel Popa, Plinio Maroni, Michal Borkovec
Charge reversal of sulfate latex particles by adsorbed linear poly(ethylene imine) probed by multiparticle colloidal probe technique
Journal of Physical Chemistry B **115**, 9098 (2011)

24. Emek Seyrek, José Hierrezuelo, Amin Sadeghpour, **Istvan Szilagyi**, Michal Borkovec
Molecular mass dependence of adsorbed amount and hydrodynamic thickness of polyelectrolyte layers
Physical Chemistry Chemical Physics **13**, 12716 (2011)

23. Emek Seyrek, José Hierrezuelo, **Istvan Szilagyi**, Amin Sadeghpour, Michal Borkovec
Towards Ångström resolution with dynamic light scattering
Chimia **65**, 439 (2011)

22. José Hierrezuelo, **Istvan Szilagyi**, Andrea Vaccaro, Michal Borkovec
Probing nanometer–thick polyelectrolyte layers adsorbed on oppositely charged particles by dynamic light scattering
Macromolecules **43**, 9108 (2010)

21. José Hierrezuelo, Amin Sadeghpour, **Istvan Szilagyi**, Andrea Vaccaro, Michal Borkovec
Electrostatic stabilization of charged colloidal particles with adsorbed polyelectrolytes of opposite charge

Langmuir **26**, 15109 (2010)

20. **Istvan Szilagyi**, Erich Königsberger, Peter M. May
Characterization of chemical speciation of titanyl sulfate solutions for production of titanium dioxide precipitates
Inorganic Chemistry **48**, 2200 (2009)

19. **Istvan Szilagyi**, Imre Labádi, Istvan Pálinkó
Thermal stabilities of nanocomposites: mono– or binuclear Cu complexes intercalated or immobilised in/on siliceous materials
Nanopages **4**,1 (2009)

18. **Istvan Szilagyi**, Erich Königsberger, Peter M. May
Spectroscopic characterization of weak interactions in acidic titanyl sulfate–iron(II) sulfate solutions
Dalton Transactions 7717 (2009)

17. Imre Labádi, Mária Benkő, Kata Markó, **Istvan Szilagyi**
Mimicking a superoxide dismutase (SOD) enzyme by copper(II) and zinc(II)–complexes
Reaction Kinetics and Catalysis Letters **96**, 327 (2009)

16. **Istvan Szilagyi**, Ottó Berkesi, Mónika Sipiczki, Laszlo Korecz, Antal Rockenbauer, Istvan Pálinkó
Preparation, characterization and catalytic activities of immobilized enzyme mimics
Catalysis Letters **127**, 239 (2009)

15. Erich Königsberger, Lan–Chi Königsberger, **Istvan Szilagyi**, Peter M. May
Measurement and prediction of physicochemical properties of liquors relevant to the sulfate process for titania production. 1. Densities in the $TiOSO_4$–$FeSO_4$–H_2SO_4–H_2O system
Journal of Chemical & Engineering Data **54**, 520 (2009)

14. Q. Wang, A. Jancsó, E. Leino, P. Poijarvi–Virta, K. Ketomaki, P. Virta, **I. Szilagyi**, S. Mikkola, T. Gajda, H. Lönnberg
Base and sequence selective cleavage of RNA phophodiester bonds by zinc(II) azacrown chelates
Collection Symposium Series – Chemistry of Nucleic Acid Components **10**, 63 (2008)

13. Qi Wang, Ewelina Leino, Attila Jancsó, **Istvan Szilagyi**, Tamás Gajda, Emilia Hietamaki, Harri Lönnberg
Zn^{2+} complexes of di– and tri–nucleating azacrown ligands as base moiety selective cleaving agents of RNA 3`,5`–phosphodiester bonds: binding to guanine base
ChemBioChem **9**, 1739 (2008)

12. **I. Szilagyi**, S. Mikkola, H. Lönnberg, I. Labádi, I. Pálinkó
Hydrolysis of dinucleoside phosphates – mRNA 5' cap analogues – promoted by a binuclear copper(II)–zinc(II) complex
Journal of Inorganic Biochemistry **101**, 1400 (2007)

11. Leena Maanpaa, Sharmin Taherpour, Zhibo Zhang, Clemence Guillaume, **Istvan Szilagyi**, Esa Maki, Satu Mikkola
Cu^{2+}TerPy complexes as catalysts of the cleavage of the 5`–*cap* structure of mRNA
Nucleosides, Nucleotides and Nucleic Acids **26**, 1423 (2007)

10. **Istvan Szilagyi**, Laszlo Horvath, Imre Labádi, Klara Hernadi, Istvan Pálinkó, Tamás Kiss
Mimicking catalase and catecholase enzymes by copper(II)–containing complexes
Central European Journal of Chemistry **4**, 118 (2006)

9. **I. Szilagyi**, I. Labádi, K. Hernadi, I. Pálinkó, I. Fekete, L. Korecz, A. Rockenbauer, T. Kiss
Superoxide dismutase activity of a Cu–Zn complex – bare and immobilised
New Journal of Chemistry **29**, 740 (2005)

8. **I. Szilagyi**, Z. Kele, I. Labádi, K. Hernadi, I. Pálinkó, T. Kiss
ESI–MS and MALDI–MS investigation of a superoxide dismutase mimicking imidazolato–bridged Cu–Zn complex
Rapid Communications in Mass Spectrometry **19**, 2878 (2005)

7. **I. Szilagyi**, E. Pál, L. Horvath, I. Labádi
Interaction of N–hydroxyethyl–glycin with metal ions
Hungarian Journal of Chemistry **111**, 83 (2005)

6. **I. Szilagyi**, I. Labádi, K. Hernadi, T. Kiss, I. Pálinkó
Montmorillonite intercalated Cu(II)–histidine complex – synthesis, characterisation and superoxide dismutase activity
Studies in Surface Science and Catalysis **158**, 1011 (2005)

5. **I. Szilagyi**, I. Labádi, K. Hernadi, I. Pálinkó, N.V. Nagy, L. Korecz, A. Rockenbauer, Z. Kele, T. Kiss
Speciation study of an imidazolate–bridged copper(II)–zinc(II) complex in aqueous solution
Journal of Inorganic Biochemistry **99**, 1619 (2005)

4. **I. Szilagyi**, I. Labádi, K. Hernadi, I. Pálinkó, T. Kiss
Synthesis and IR spectroscopic characrerisation of immobilised superoxide dismutase (SOD) mimicking complexes
Journal of Molecular Structure **744–747**, 495 (2005)

3. **I. Szilagyi**, G. Nagy, K. Hernádi, I. Labádi, I. Pálinkó
Modeling copper–containing enzyme mimics
Journal of Molecular Structure THEOCHEM **666–667**, 451 (2003)

2. I. Labádi, **I. Szilagyi**, N. I. Jakab, K. Hernádi, I. Pálinkó
Metal complexes immobilised in/on porous matrices – possible enzyme mimics
Material Science **21**, 235 (2003)

1. E. Princz, **I. Szilagyi**, K. Mogyorósi, I. Labádi
Lanthanide complexes of ethylenediaminotetramethylene–phosphonic acid
Journal of Thermal Analysis and Calorimetry **69**, 427 (2002)

LECTURES ON SCIENTIFIC MEETINGS (as presenting author)

73. Adél Szerlauth, Árpád Varga, Tamara Madácsy, Istvan Toth, József Maléth, **Istvan Szilagyi**
Immobilization of triple enzyme cascade on 2D nanosheets to reduce oxidative stress
5th International Conference on Bio-based Polymers and Composites
Esztergom (1-5 September 2024) Hungary

72. **Istvan Szilagyi**
Nanozyme-based antioxidant colloids
Invited presentation at the Institute of Systems and Physical Biology, Shenzhen Bay Laboratories
Shenzhen (5 August 2024) China

71. **Istvan Szilagyi**
Design of nanozyme architectures to combat oxidative stress
Invited presentation at the International Conference on Manipulation, Manufacturing and Measurement on the Nanoscale
Zhongshan (29 July–2 August 2024) China

70. **Istvan Szilagyi**
Self-assembled nanozyme architectures as stable and efficient scavengers for reactive oxygen species
International Conference on Nanoscience and Nanotechnology (ICONN)
Melbourne (13–15 February 2024) Australia

69. **Istvan Szilagyi**
Heteroaggregation as a tool to improve colloidal stability and antioxidant activity of nanozyme dispersions
Australasian Colloid & Interface Symposium
Terrigal (4–7 February 2024) Australia

68. Nizar Alsharif, Adél Szerlauth, **Istvan Szilagyi**
How nanozyme-based colloids can combat oxidative stress?
37th Conference of the European Colloid and Interface Society
Naples (3–8 September 2023) Italy

67. **Istvan Szilagyi**
Antioxidant colloids via immobilization of biocatalytic centers in composites

Invited presentation at the Centre for Micro- and Nanosciences and technologies, University of Rijeka
Rijeka (27 June 2023) Croatia

66. **Istvan Szilagyi**, Dóra Takács, Bojana Katana
Specific effects of ionic liquids on the dispersion stability of low dimensional nanoparticles
9th International Congress on Ionic Liquids – COIL9
Lyon (24–28 April 2023) France

65. **I. Szilagyi**
Stability of aqueous colloid systems in the presence of electrolytes: Classical theories versus recent results
Invited presentation at the European Water Technology Week
Leeuwarden (19–22 September 2022) The Netherlands

64. Nizar B. Alsharif, **I. Szilagyi**
Heteroaggregation of nanozymes and latex particles for highly stable antioxidant colloids
Conference on Chemistry, Physics and Biology of Colloids and Interfaces
Eger (6–10 June 2022) Hungary

63. **I. Szilagyi**
Nanoparticle-based biocatalytic systems to combat oxidative stress
Invited presentation at the 33rd Australian Colloid and Surface Science Student Conference
Online (31 January–2 February 2022)

62. Bojana Katana, Zoltán Somosi, Szilárd Sáringer, Szabolcs Muráth, **Istvan Szilagyi**
Polyelectrolyte-assisted immobilization of native and artificial enzymes for preparation of antioxidant colloids
Keynote presentation at the 35th Conference of the European Colloid and Interface Society
Online (5–10 September 2021)

61. **Istvan Szilagyi**, József Maléth, Marko Pavlovic
Broad-spectrum radical scavenging nanocomposites by co-immobilization of antioxidant enzymes
262nd American Chemical Society National Meeting & Exposition
Online (22–26 August 2021)

60. **Istvan Szilagyi**
Design of biocompatible colloid systems for scavenging reactive oxygen species
Keynote presentation at the VEBLEO Webinar on Nanomedicine, Nanomaterials and Nanotechnology
Online (25 June 2021)

59. Dóra Takács, Bojana Katana, **Istvan Szilagyi**
Specific effects of ionic liquid constituents on the stability of particle dispersions
95th ACS Colloid & Surface Science Symposium
Online (14–16 June 2021)

58. **Istvan Szilagyi**
Hybrid nanoparticles to combat oxidative stress
Invited seminar at the Department of Materials Science & NanoEngineering, Rice University
Online (4 March 2021)

57. **Istvan Szilagyi**
Light scattering techniques to study particle dispersions in the presence of biomacromolecules
SCCPLS 2020 Online Summer School and Workshop
Rijeka (27–29 July 2020) Croatia

56. **Istvan Szilagyi**
Reducing oxidative stress by enzyme-loaded nanoparticle dispersions
Invited presentation at the International Conference on Nanoscience and Nanotechnology (ICONN)
Brisbane (9–13 February 2020) Australia

55. **Istvan Szilagyi**
Immobilization of antioxidant proteins on polyelectrolyte-modified nanoparticles

Invited presentation at the Medicinal Chemistry Laboratory, University of Queensland
St Lucia (13 February 2020) Australia

54. **Istvan Szilagyi**, Marko Pavlovic, Szabolcs Murath
Nanoclay-based enzyme cascade for decomposition of reactive oxygen species
93rd ACS Colloid & Surface Science Symposium
Atlanta (16–19 June 2019) United States of America

53. **I. Szilagyi**, M. Pavlovic, S. Muráth
Co-immobilization of superoxide dismutase and horseradish peroxidase on polyelectrolytefunctionalized layered double hydroxide particles
Invited presentation at the Conference on Chemistry, Physics and Biology of Colloids and Interfaces
Eger (2–6 June 2019) Hungary

52. Marko Pavlovic, Paul Rouster, Szabolcs Muráth, Zoltán Somosi, Szilárd Sáringer, **Istvan Szilagyi**
Immobilization of natural or artificial biocatalysts on polyelectrolyte functionalized inorganic nanoparticles
8th Szeged International Workshop on Advances in Nanoscience
Szeged (7–10 October 2018) Hungary

51. **I. Szilagyi**, M. Pavlovic, P. Rouster
Antioxidant inorganic-organic hybrids of high functional and colloid stability
32nd Conference of the European Colloid and Interface Society
Ljubljana (2–7 September 2018) Slovenia

50. S. Muráth, M. Pavlovic, Z. Somosi, S. Sáringer, **I. Szilagyi**
Ion specific effects on the colloidal stability of particle dispersions
35th International Conference on Solution Chemistry
Szeged (26–30 August 2018) Hungary

49. Paul Rouster, Marko Pavlovic, Szilárd Sáringer, Szabolcs Muráth, Zoltán Somosi, **István Szilagyi**
Antioxidant titania-enzyme hybrid materials
Keynote presentation at the 11th Conference on Colloid Chemistry
Eger (28–30 May 2018) Hungary

48. **Istvan Szilagyi**
Formulation of nanoparticles: from basic research to everyday systems
Invited presentation at the Faculty of Chemistry and Chemical Technology, University of Ljubljana
Ljubljana (11 April 2018) Slovenia

47. **Istvan Szilagyi**, Marko Pavlovic, Paul Rouster
Design of stable nanocomposite suspensions of enzymatic activity
31st Conference of the European Colloid and Interface Society
Madrid (3–8 September 2017) Spain

46. **Istvan Szilagyi**
Design of efficient enzyme delivery systems by tuning the colloidal stability of inorganic nanoparticles
Invited presentation at the Laboratory of Physics of Complex Materials, EPFL
Lausanne (15 March 2017) Switzerland

45. Marko Pavlovic, Paul Rouster, **Istvan Szilagyi**
Highly stable suspensions of enzyme-clay composites with antioxidant activity
7th International Colloids Conference
Sitges (18–21 June 2017) Spain

44. Marko Pavlovic, Paul Rouster, **Istvan Szilagyi**
Stabilization of enzyme-layered double hydroxide nanocomposites in suspensions
7th Szeged International Workshop on Advances in Nanoscience
Szeged (12–15 October 2016) Hungary

43. Marko Pavlovic, Paul Rouster, **Istvan Szilagyi**

Formulation of Enzyme-Layered Double Hydroxide Nanocomposites
8th International Conference on Advanced Nanomaterials
Guildford (12–14 September 2016) United Kingdom

42. **Istvan Szilagyi**
Tuning the Colloidal Stability of Enzyme-Clay Nanocomposites: Towards Efficient Delivery Systems
Invited presentation at the School of Chemistry, University of Nottingham
Nottingham (14 September 2016) United Kingdom

41. **Istvan Szilagyi**
Enzyme-Layered Double Hydroxide Nanocomposites: Synthesis, Characterization and Colloidal Stability
Invited presentation at the School of Science & Technology, Nottingham Trent University
Nottingham (15 September 2016) United Kingdom

40. **Istvan Szilagyi**
Design and Formulation of Layered Inorganic Nanomaterials: Carrier Systems for Enzyme Delivery
Invited presentation at the School of Food Science and Nutrition, University of Leeds
Leeds (16 September 2016) United Kingdom

39. **Istvan Szilagyi**, Tamas Oncsik, Gregor Trefalt, Michal Borkovec
Ion Specific Effects on Particle Aggregation in Aqueous Solutions of Ionic Liquids
XXVIth EUCHEM Conference on Molten Salts and Ionic Liquids
Vienna (3–8 July 2016) Austria

38. **Istvan Szilagyi**
Tuning the Aggregation of Layered Nanoparticles by Polyelectrolytes
Invited presentation at the Laboratory of Chemistry, Catalysis, Polymers and Process, CPE Lyon
Lyon (11 February 2016) France

37. Marko Pavlovic, Endre Horvath, Laszlo Forro, **Istvan Szilagyi**
Highly stable titanate nanowire dispersions as potential nanocarriers
251st American Chemical Society National Meeting & Exposition
San Diego (13–17 March 2016) United States of America

36. **Istvan Szilagyi**
Design of Efficient Delivery Systems by Tuning the Aggregation of Layered Nanoparticles
Invited presentation at the Ira A. Fulton Schools of Engineering, Arizona State University
Phoenix (18 March 2016) United States of America

35. **Istvan Szilagyi**
Formulation of carrier nanoparticles: Towards highly stable delivery systems
Invited presentation at the EMN Meeting on Energy, Materials and Nanotechnology
Dubrovnik (4–7 May 2016) Croatia

34. **Istvan Szilagyi**, Tamas Szabo, Anthony Desert, Tamas Oncsik, Gregor Trefalt, Michal Borkovec
Effect of Ionic Liquids on Aggregation of Latex Colloids
Invited presentation at the Workshop on Ionic Liquids at Interfaces
Belek (3–5 October 2015) Turkey

33. **Istvan Szilagyi**, Endre Horvath, Laszlo Forro, Vanessa Prevot
Dispersion stability of layered materials in the presence of polyelectrolytes
Euroclay 2015 – the quadrennial meeting of the European Clay Groups Association
Edinburgh (5–10 July 2015) United Kingdom

32. **I. Szilagyi**, T. Oncsik, T. Szabo, A. Desert, G. Trefalt, M. Borkovec
Aggregation Rates and Mechanism of Latex Particles in Ionic Liquids
15th Conference of the International Association of Colloid and Interface Scientists
Mainz (24–29 May 2015) Germany

31. Endre Horvath, Laszlo Forro, **Istvan Szilagyi**

Aggregation of Titanate Nanowires in the Presence of Polyelectrolytes
5th International Colloids Conference
Amsterdam (21–24 June 2015) The Netherlands

30. E. Horvath, L. Forro, T. Szabo, **I. Szilagyi**
Formulation of multifunctional titanate nanowire dispersions by polyelectrolytes
Smart and Green Interfaces Conference
Belgrade (30 March – 1 April 2015) Serbia

29. **Istvan Szilagyi**, Tamas Szabo, Anthony Desert, Gregor Trefalt, Tamas Oncsik, Michal Borkovec
Aggregation rates of latex particles in ionic liquids
7th Biennial Australian Colloid & Interface Science Symposium
Hobart (1–5 February 2015) Australia

28. **Istvan Szilagyi**
Layered nanomaterial dispersions for energy related applications
Invited presentation at the Department of Chemistry and Biochemistry, University of Bern
Bern (20 February 2015) Switzerland

27. **Istvan Szilagyi**
Formulation of nanoparticle dispersions
Invited presentation at the Adolphe Merkle Institute, University of Fribourg
Fribourg (2 March 2015) Switzerland

26. **Istvan Szilagyi**
Colloidal stability of particles in ionic liquids
Invited presentation at the Department of Materials Science and Engineering, Cornell University
Ithaca (26 June 2014) United States of America

25. **Istvan Szilagyi**
Stabilization mechanism of colloidal particles in molten salts
Invited presentation at the Department of Chemistry and Biomolecular Science, Clarkson University
Potsdam (1 July 2014) United States of America

24. **Istvan Szilagyi**, Tamas Szabo, Anthony Desert, Gregor Trefalt, Tamas Oncsik, Michal Borkovec
Particle aggregation in ionic liquids
XXVth EUCHEM Conference on Molten Salts and Ionic Liquids
Tallinn (6–11 July 2014) Estonia

23. **Istvan Szilagyi**, Tamas Szabo, Anthony Desert, Gregor Trefalt, Michal Borkovec
Stability of particle dispersions in ionic liquids
International Conference on Nanoscience and Nanotechnology (ICONN)
Adelaide (2–6 February 2014) Australia

22. **Istvan Szilagyi**
Stability of colloidal particles in ionic liquids
Invited presentation at the School of Chemistry, Monash University
Melbourne (6 February 2014) Australia

21. **Istvan Szilagyi**
Aggregation of colloidal particles induced by oligomers and polyelectrolytes
Invited presentation at the Chemistry Institute, Blaise Pascal University
Clermont–Ferrand (23 September 2013) France

20. **Istvan Szilagyi**, Prashant Sinha, Tamás Oncsik, Gregor Trefalt, Fransisco Javier Montes Ruiz–Cabello, Plinio Maroni, Michal Borkovec
Interaction forces in particle dispersions revealed by aggregation and direct force measurements
27th Conference of the European Colloid and Interface Society
Sofia (1–6 September 2013) Bulgaria

19. **Istvan Szilagyi**
Nanoparticle dispersions: where inorganic and colloid chemistry meet
Invited presentation at the Department of Chemistry, University of Fribourg
Fribourg (8 February 2013) Switzerland

18. **Istvan Szilagyi**, Amin Sadeghpour, Michal Borkovec
Stability of colloidal suspensions in the presence of multivalent ions
Swiss Chemical Society – 2012 Fall Meeting
Zürich (13 September 2012) Switzerland

17. **Istvan Szilagyi**
Effect of multivalent ions on colloidal stability of charged particles
Invited presentation at the Department of Geography and Environmental Engineering, John Hopkins University
Baltimore (16 August 2012) United States of America

16. **Istvan Szilagyi**, Amin Sadeghpour, Michal Borkovec
Aggregation in colloidal dispersions induced by polyelectrolytes or their oligomers
244th American Chemical Society National Meeting & Exposition
Philadelphia (19–23 August 2012) United States of America

15. **I. Szilagyi**, E. Seyrek, J. Hierrezuelo, A. Sadeghpour, M. Borkovec
Structure of polyelectrolyte layers adsorbed on charged colloidal particles
9th International Symposium on Polyelectrolytes – ISP 2012
Lausanne (9–12 July 2012) Switzerland

14. **Istvan Szilagyi**, José Hierrezuelo, Emek Seyrek, Michal Borkovec
Characterization of polyelectrolyte films adsorbed on colloidal particles
International Symposium on Advanced Macromolecular Systems Across the Length Scales
Siófok (3–6 June 2012) Hungary

13. **Istvan Szilagyi**
Surface characteristics of latex particles modified by polyelectrolyte adsorption
Invited presentation at the School of Environmental and Life Sciences, University of Newcastle
Newcastle (24 February 2012) Australia

12. **I. Szilagyi**, E. Seyrek, J. Hierrezuelo, A. Sadeghpour, M. Borkovec
Surface characteristics of latex particles modified by polyelectrolyte adsorption
International Conference on Nanoscience and Nanotechnology (ICONN)
Perth (5–9 February 2012) Australia

11. **Istvan Szilagyi**
Interaction of polyelectrolytes with charged particles
Invited presentation at the Department of Inorganic and Analytical Chemistry, University of Szeged
Szeged (21 April 2011) Hungary

10. **Istvan Szilagyi**, José Hierrezuelo, Andrea Vaccaro, Michal Borkovec
Charging properties and colloidal aggregation in latex particle dispersions in the presence of linear polyethyleneimine
24th Conference of the European Colloid and Interface Society
Prague (5–10 September 2010) Czech Republic

9. **Istvan Szilagyi**
Adventures in materials science: from bio– to colloid chemistry
Invited presentation at the Applied Cigarette Research Group of Phillip Morris International
Neuchatel (7 June 2010) Switzerland

8. **Istvan Szilagyi**
Science at interface: from surface phenomena to colloid stability
Invited presentation at the Friedrich–Schiller–Universität
Jena (26 March 2010) Germany

7. **Istvan Szilagyi**, Erich Königsberger, Peter M. May
Speciation study of titanyl sulphate solutions
The Snowstorm Project University Collaboration Workshop
Perth (7 November 2007) Australia

6. **Istvan Szilagyi**
Characterization of titanyl solutions
Invited presentation at the Newcastle Technology Centre of BHP Billiton Ltd.
Newcastle (1 December 2006) Australia

5. **Szilagyi, Istvan**; Wang, Qi; Lönnberg, Harri; Mikkola, Satu; Labádi, Imre; Kiss, Tamás
Interaction of dinucleotide mono and triphosphates with metal complexes
XXXXIth Conference on Coordination Chemistry
Mátrafüred (31 May – 2 June 2006) Hungary

4. **Szilagyi, Istvan**; Labádi, Imre; Hernádi, Klára; Pálinkó, Istvan; Győr, Miklós; Rockenbauer, Antal; Kiss, Tamás
Potentiometric, spectrophotometric and EPR spectroscopic investigation of the system containing copper(II), diethylenetriamine, imidazole, zinc(II), tris(aminoethyl)amine
XXXIXth Conference on Coordination Chemistry
Agárd–Gárdony (26–28 May 2004) Hungary

3. **Szilagyi, I.**; Labádi, I.; Hernádi, K.; Pálinkó, I.; Kiss, T.
SOD mimicking metal complexes studied by the Riboflavin/NBT probe reaction
Chemistry Lectures (KEN)
Szeged (27–29 October 2003) Hungary

2. **Szilagyi I.**; Labádi I.; Kiss T.; Pálinkó I.; Hernádi K.
Immobilization of enzyme mimicking complexes in/on porous materials – superoxide dismutase (SOD) activity
XXXVIIIth Conference on Coordination Chemistry
Gyula (21–23 May 2003) Hungary

1. Labádi, I., **Szilagyi, I.**
Investigation of complexing agents with fast biodecomposition
Chemistry Lectures (KEN)
Szeged (28–30 October 2002) Hungary