

**Original contributions**, review papers, book chapters, [books](#), [book reviews](#)

**Accepted manuscripts and online publications:**

*Functional coatings of antithrombogenic polysaccharides on polyester biomaterials to improve hemocompatibility, protein-repellence and endothelial cell response*

T. Mohan, M. Bracic, B. Nagy Miklós, O. Pohl, F. Lackner, T. A. Steindorfer, R. Fischer, Th. Heinze, A. Olschewski, K. Stana-Kleinscheck, N. Chandran  
iScience (2024), ISCIENCE-D-24-03098R1

[Regioselective hexyldimethylsilylation of \(1 →3\)-glucans – Does the linkage type matter](#)

A. Koschella, Th. Heinze, E. Severac, C Moulis

Carbohydrate Polymers (2024) DOI: 10.1016/j.carbpol.2024.122439

[Photoluminescence enhancement after thermal treatment of cellulose from different sources](#)

E. U. Pulido-Barragán, E. Rodríguez-González, A. B. López-Oyama, A. B.

Morales-Cepeda, C. F. Castro-Guerrero, Th. Heinze, A. Koschella

Cellulose (2024) DOI: 10.1007/s10570-024-05986-7

**Printed publications:**

561. [Functional agarose hydrogels obtained by employing homogeneous synthesis strategies](#)

M. Gericke, M. Witzler, A. Enkelmann, G. Schneider, M. Schulze, Th. Heinze

Polysaccharides **5** (2024) 184-197.

560. [Sulfo ethyl cellulose/Nafion composite for high-temperature proton exchange membrane](#)

K. Charradi, Z. Landolsi, Th. Heinze, A. Brahmia, R. Chtourou, S. M. A. S. Keshk

Journal of Applied Polymer Science **141** (2024) e55665.

559. [Efficient heterogeneous synthesis of nucleophilic carboxymethyl hydrazides of polysaccharides](#)

H. Würfel, A. Pfeifer, Th. Heinze

Biopolymers **115** (2024) e23574.

558. [Synthesis and characterization of polysaccharide carbamates and mixed carbamates with tunable water solubility](#)

M. Gericke, Z. Atmani, L. H. Skodda, Th. Heinze

Carbohydrate Polymer Technologies and Applications **7** (2024) 100479.

557. [Direct functionalization of polysaccharide-based xylan phenyl carbonate nanoparticles with tumor cell specific antibodies](#)

V. Bilemjian, Y. Lin, W. Wan, G. Egri, G. Huls, Th. Heinze, E. Bremer, M. Gericke, L.

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ChemBioChem **25** (2024) e202300828.

556. [Synthesis and characterization of nucleophilic polysaccharide carbazates](#)  
K. Geitel, H. Würfel, W. Günther, Th. Heinze  
Carbohydrate Polymers **329** (2024) 121727.

555. [The European Polysaccharide Network of Excellence \(EPNOE\) research roadmap 2040: Advanced strategies for exploiting the vast potential of polysaccharides as renewable bioresources](#)  
M. Gericke, A. J. R. Amaral, T. Budtova, P. De Wever, Th. Groth, Th. Heinze, H. Höfte, A. Huber, O. Ikkala, J. Kapuśniak, R. Kargl, J. F. Mano, M. Másson, P. Matricardi, B. Medronho, M. Norgren, T. Nypelö, L. Nyström, A. Roig, M. Sauer, H. Schols, J. van der Linden, T. Wrodnigg, C. Xu, G. Yakubov, K. Stana Kleinschek, P. Fardim  
Carbohydrate Polymers **326** (2024) 121633.

554. [Dually modified cellulose as a non-viral vector for the delivery and uptake of HDAC3 siRNA](#)  
J. Hülsmann, H. Lindemann, J. Wegener, M. Kühne, M. Godmann, A. Koschella, S. M. Coldewey, Th. Heinze, T. Heinzl  
Pharmaceutics **15** (2023) 2659.

553. [Incorporating of sulfo ethyl cellulose to augment the performance of sulfonated poly \(ether ether ketone\) composite for proton exchange membrane fuel cells](#)  
K. Charradi, Z. Landolsi, L. Gabriel, W. Mabrouk, A. Koschella, Z. Ahmed, A. Elnaggar, Th. Heinze, S. M. A. S. Keshk  
Journal of Solid State Electrochemistry **27** (2023) 3415-3423.

552. [Structural and chemical insights into the prebiotic property of hemicellulosic polysaccharide from Santalum album L.](#)  
M. Patra, D. Das, S. Dey, A. Koschella, Th. Heinze  
Carbohydrate Polymers **321** (2023) 121291.

551. [Structure design of polysaccharides: Old hat or topical?](#)  
A. Koschella, Th. Heinze  
BioResources **18** (2023) 6650-6679.

550. [Investigation of cellulose dissolution in morpholinium-based solvents: Impact of solvent structural features on cellulose dissolution](#)  
S. Naserifar, A. Koschella, Th. Heinze, D. Bernin, M. Hasani  
RSC Advances **13** (2023) 18639-18650.

549. [Dextran thioparaconate – Evaluation of the multifunctional thiolactone linker for easily adaptable polysaccharide modification](#)  
A. Kemmer, Th. Heinze  
Carbohydrate Polymers **315** (2023) 120946.

548. [Preparation of bacterial cellulose using enzymatic hydrolysate of olive pomace as carbon source](#)

C. Sagdic-Oztan, A. Koschella, Th. Heinze, N. G. Karaguler, M. Tuter  
BioResources **18** (2023) 4168-4181.

547. *From current research to chemistry education: Preparation of polysaccharide-based Nanoparticles by dialysis*

A. Fruntke, B. Blümbott, A. Koschella, Th. Heinze, T. Wilke  
New Perspectives in Science Education 2023 – Conference Proceedings,  
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546. [Efficient heterogeneous synthesis of polygalacturonic hydroxamic acid: A versatile chelator for metal ion binding](#)

H. Würfel, W. Dang, Th. Heinze  
Cellulose Chemistry and Technology **57** (2023) 93-96.

545. [Reactive xylan derivatives for azid-/alkyne-click-chemistry approaches - From modular synthesis to gel-formation](#)

M. Gericke, L. H. Skodda, Th. Heinze  
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544. [Glucose scavenging with pectin hydrazide: A step toward designing innovative, functional, all-sugar-based polymers](#)

H. Würfel, K. Geitel, W. Günther, I. Anufriev, U. S. Schubert, I. Nischang, Th. Heinze  
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543. [HDACi delivery systems based on cellulose valproate nanoparticles](#)

H. Lindemann, M. Kühne, A. Koschella, M. Godmann, T. Heinzel, Th. Heinze  
in: "HDAC/HAT Function Assessment and Inhibitor Development - Methods and Protocols", O. H. Krämer (Ed.), 2022, Springer Nature, vol. 2589, pp. 195-205.

542. [Analysis of HDACi-coupled nanoparticles: Opportunities and challenges](#)

M. Kühne, S. Hofmann, H. Lindemann, Z. Cseresnyés, A. Dzierza, D. Schröder, M. Godmann, A. Koschella, C. Eggeling, D. Fischer, M. T. Figge, Th. Heinze, T. Heinzel  
in: "HDAC/HAT Function Assessment and Inhibitor Development - Methods and Protocols", O. H. Krämer (Ed.), 2022, Springer Nature, vol. 2589, pp. 129-144.

541. [Clickable polymers accessible through nucleophilic substitution on polysaccharides: A sophisticated route to functional polymers](#)

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540. [Side reactions during the homogeneous esterification of starch with unsaturated cinnamic acid derivatives in molten imidazole](#)

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539. [Synthesis of novel polygalacturonic acid hydrazones and their rheological and emulsifying properties](#)

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538. [6-Deoxy-6-hydrogenocellulose: Synthesis and characterization of cellulose with reduced functionality](#)  
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P. Hashemi, S. Wenderoth, A. Koschella, Th. Heinze, P. Mischnick  
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535. [Cellulose allylcarbamate with high content of reactive double bonds for thiol-ene reaction](#)  
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534. [Composite nanoparticles derived by self-assembling of hydrophobic polysaccharide derivatives and lignin](#)  
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533. [Renewable thermoplastics – Starch fatty acid esters as alternatives to synthetics](#)  
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532. [Spatial distribution of functional groups in cellulose ethers by DNP-enhanced solid-state NMR spectroscopy](#)  
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531. [Green fabrication of high strength, transparent cellulose-based films with durable fluorescence and UV-blocking performance](#)  
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Advanced Industrial and Engineering Polymer Research **5** (2022) 26-32.
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524. [Structure, thermal stability and electrical properties of cellulose-6-phosphate: Development of a novel fast Na-ionic conductor](#)  
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521. [Reactive nanoparticles derived from polysaccharide phenyl carbonates](#)  
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International Journal of Pharmaceutics **601** (2021) 120567.
519. [Upgrading Euphorbia Antisyphilitica fiber compost: A waste material turned into nanocrystalline cellulose](#)  
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518. [Green fabrication of highly conductive paper electrodes via interface engineering with aminocellulose](#)

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516. [Efficient heterogeneous synthesis of reactive polygalacturonic acid hydrazides](#)

H. Würfel, K. Geitel, Th. Heinze  
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515. [Biocompatible sulfated valproic acid-coupled polysaccharide-based nanocarriers with HDAC inhibitory activity](#)

M. Kühne, H. Lindemann, C. Grune, D. Schröder, Z. Cseresnyés, M. Godmann, A. Koschella, M. T. Figge, C. Eggeling, D. Fischer, Th. Heinze, Th. Heinzel  
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513. [The role of formamidine groups in dextran based non-viral vectors for gene delivery on their physicochemical and biological characteristics](#)

D. Fischer, N. Dusek, K. Hotzel, Th. Heinze  
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512. [Protein repellent anti-coagulative mixed-charged cellulose derivative coatings](#)

M. Bračič, T. Mohan, R. Kargl, Th. Grießer, Th. Heinze, K. Stana Kleinschek  
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509. [Mechanistic considerations of efficient esterification of starch with propionic anhydride/lauric acid in the green solvent imidazole](#)

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503. [Meltable fatty acid esters of  \$\alpha\$ -1,3-glucan as potential thermoplastics](#)  
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L. Gabriel, A. Koschella, A. Tied, A. Pfeifer, Th. Heinze  
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498. [Polysaccharide nanoparticles bearing HDAC inhibitor as non-toxic nanocarrier for drug delivery](#)  
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492. [\*Synthesis, characterization and ampyrone drug release behavior of magnetite nanoparticle/2,3-dialdehyde cellulose-6-phosphate composite\*](#)  
S. M. A. S. Keshk, A. A. El-Zahhar, Q. A. Alsulami, M. Jaremko, S Bondock, Th. Heinze  
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M. Grube, I. Perevyazko, Th. Heinze, U. S. Schubert, I. Nischang  
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469. [Non-aqueous solvent for efficient dissolution of polygalacturonic acid](#)

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