

Luigi Lay

List of Publications by Year in descending order

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92
papers

2,702
citations

126907

33
h-index

214800

47
g-index

109
all docs

109
docs citations

109
times ranked

2413
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Recent advances on smart glycoconjugate vaccines in infections and cancer. <i>FEBS Journal</i> , 2022, 289, 4251-4303. | 4.7 | 39 |
| 2 | Conjugation Techniques and Linker Strategies for Carbohydrate-Based Vaccines. , 2021, , 676-705. | | 2 |
| 3 | Combining cross-coupling reaction and Knoevenagel condensation in the synthesis of glyco-BODIPY probes for DC-SIGN super-resolution bioimaging. <i>Bioorganic Chemistry</i> , 2021, 109, 104730. | 4.1 | 10 |
| 4 | Emerging glyco-based strategies to steer immune responses. <i>FEBS Journal</i> , 2021, 288, 4746-4772. | 4.7 | 22 |
| 5 | Glycan Array Evaluation of Synthetic Epitopes between the Capsular Polysaccharides from <i>Streptococcus pneumoniae</i> 19F and 19A. <i>ACS Chemical Biology</i> , 2021, 16, 1671-1679. | 3.4 | 8 |
| 6 | Immunobiology of Carbohydrates: Implications for Novel Vaccine and Adjuvant Design Against Infectious Diseases. <i>Frontiers in Cellular and Infection Microbiology</i> , 2021, 11, 808005. | 3.9 | 10 |
| 7 | A stabilized glycomimetic conjugate vaccine inducing protective antibodies against <i>Neisseria meningitidis</i> serogroup A. <i>Nature Communications</i> , 2020, 11, 4434. | 12.8 | 18 |
| 8 | Gold nanoparticles morphology does not affect the multivalent presentation and antibody recognition of Group A <i>Streptococcus</i> synthetic oligorhamnans. <i>Bioorganic Chemistry</i> , 2020, 99, 103815. | 4.1 | 24 |
| 9 | Gold nanoparticle-based platforms for vaccine development. <i>Drug Discovery Today: Technologies</i> , 2020, 38, 57-67. | 4.0 | 46 |
| 10 | Iron and Ruthenium Glycoporphyrins: Active Catalysts for the Synthesis of Cyclopropanes and Aziridines. <i>European Journal of Inorganic Chemistry</i> , 2019, 2019, 4412-4420. | 2.0 | 10 |
| 11 | Combined Chemical Synthesis and Tailored Enzymatic Elongation Provide Fully Synthetic and Conjugation-Ready <i>Neisseria meningitidis</i> Serogroup X Vaccine Antigens. <i>ACS Chemical Biology</i> , 2018, 13, 984-994. | 3.4 | 31 |
| 12 | Synthesis and biological evaluation of a trisaccharide repeating unit derivative of <i>Streptococcus pneumoniae</i> 19A capsular polysaccharide. <i>Bioorganic and Medicinal Chemistry</i> , 2018, 26, 5682-5690. | 3.0 | 16 |
| 13 | The Conformation of the Mannopyranosyl Phosphate Repeating Unit of the Capsular Polysaccharide of <i>Neisseria meningitidis</i> Serogroup A and Its Carba-mimetic. <i>European Journal of Organic Chemistry</i> , 2018, 2018, 4548-4555. | 2.4 | 19 |
| 14 | Recent Advances in the Synthesis of Glycoconjugates for Vaccine Development. <i>Molecules</i> , 2018, 23, 1712. | 3.8 | 71 |
| 15 | Impact of ConcanavalinA affinity in the intracellular fate of Protein Corona on Glucosamine Au nanoparticles. <i>Scientific Reports</i> , 2018, 8, 9046. | 3.3 | 10 |
| 16 | Fluidic Manufacture of Star-shaped Gold Nanoparticles. <i>Chemistry - A European Journal</i> , 2017, 23, 9732-9735. | 3.3 | 26 |
| 17 | Preparation and immunogenicity of gold glyco-nanoparticles as antipneumococcal vaccine model. <i>Nanomedicine</i> , 2017, 12, 13-23. | 3.3 | 66 |
| 18 | Glycoporphyrin Catalysts for Efficient C-H Bond Aminations by Organic Azides. <i>Organometallics</i> , 2015, 34, 3774-3781. | 2.3 | 30 |

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|----|---|-----|-----------|
| 19 | A Synthetic Disaccharide Analogue from <i>Neisseria meningitidis</i> A Capsular Polysaccharide Stimulates Immune Cell Responses and Induces Immunoglobulin G (IgG) Production in Mice When Protein-Conjugated. <i>ACS Infectious Diseases</i> , 2015, 1, 487-496. | 3.8 | 21 |
| 20 | Synthesis of di- and tri-saccharide fragments of <i>Salmonella typhi</i> Vi capsular polysaccharide and their zwitterionic analogues. <i>Bioorganic and Medicinal Chemistry</i> , 2015, 23, 7439-7447. | 3.0 | 11 |
| 21 | Major Advances in the Development of Synthetic Oligosaccharide-Based Vaccines. , 2015, , 2065-2116. | | 0 |
| 22 | Synthesis and immunological evaluation of protein conjugates of <i>Neisseria meningitidis</i> X capsular polysaccharide fragments. <i>Beilstein Journal of Organic Chemistry</i> , 2014, 10, 2367-2376. | 2.2 | 31 |
| 23 | Exploring Glycosylation Reactions under Continuous-Flow Conditions. <i>Synlett</i> , 2014, 25, 2873-2878. | 1.8 | 25 |
| 24 | A Strategy for Multivalent Presentation of Carba Analogues from <i>N. meningitidis</i> A Capsular Polysaccharide. <i>European Journal of Organic Chemistry</i> , 2014, 2014, 5915-5924. | 2.4 | 10 |
| 25 | Major Advances in the Development of Synthetic -Based. , 2014, , 1-45. | | 0 |
| 26 | Factors affecting T cell responses induced by fully synthetic glyco-gold-nanoparticles. <i>Nanoscale</i> , 2013, 5, 390-400. | 5.6 | 48 |
| 27 | Synthesis of a Structural Analogue of the Repeating Unit from <i>Streptococcus pneumoniae</i> 19F Capsular Polysaccharide Based on the Cross-Metathesis/Selenocyclization Reaction Sequence. <i>Journal of Organic Chemistry</i> , 2013, 78, 5172-5183. | 3.2 | 10 |
| 28 | Immunoactivity of Protein Conjugates of Carba Analogues from <i>Neisseria meningitidis</i> A Capsular Polysaccharide. <i>ACS Chemical Biology</i> , 2013, 8, 2561-2567. | 3.4 | 35 |
| 29 | Synthesis of <i>Neisseria meningitidis</i> X capsular polysaccharide fragments. <i>Arkivoc</i> , 2013, 2013, 166-184. | 0.5 | 4 |
| 30 | Synthesis and preliminary biological evaluation of carba analogues from <i>Neisseria meningitidis</i> A capsular polysaccharide. <i>Organic and Biomolecular Chemistry</i> , 2012, 10, 6673. | 2.8 | 35 |
| 31 | Synthesis of <i>Staphylococcus aureus</i> type 5 capsular polysaccharide repeating unit using novel l-FucNAc and d-FucNAc synthons and immunochemical evaluation. <i>Bioorganic and Medicinal Chemistry</i> , 2012, 20, 6403-6415. | 3.0 | 34 |
| 32 | Phosphorylation of the Synthetic Hexasaccharide Repeating Unit Is Essential for the Induction of Antibodies to <i>Clostridium difficile</i> PSII Cell Wall Polysaccharide. <i>ACS Chemical Biology</i> , 2012, 7, 1420-1428. | 3.4 | 73 |
| 33 | First Synthesis of <i>C. difficile</i> PS-II Cell Wall Polysaccharide Repeating Unit. <i>Organic Letters</i> , 2011, 13, 378-381. | 4.6 | 37 |
| 34 | Novel carbohydrate-based bifunctional organocatalysts for nucleophilic addition to nitroolefins and imines. <i>Organic and Biomolecular Chemistry</i> , 2011, 9, 3295. | 2.8 | 32 |
| 35 | Carbohydrates and Immunology: Synthetic Oligosaccharide Antigens for Vaccine Formulation. <i>European Journal of Organic Chemistry</i> , 2011, 2011, 5723-5777. | 2.4 | 133 |
| 36 | Modeling of synthetic phosphono and carba analogues of N-acetyl-1,4-d-mannosamine 1-phosphate, the repeating unit of the capsular polysaccharide from <i>Neisseria meningitidis</i> serovar A. <i>Organic and Biomolecular Chemistry</i> , 2009, 7, 3734. | 2.8 | 19 |

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|----|---|------|-----------|
| 37 | Synthesis, molecular dynamics simulations, and biology of a carba-analogue of the trisaccharide repeating unit of <i>Streptococcus pneumoniae</i> 19F capsular polysaccharide. <i>Organic and Biomolecular Chemistry</i> , 2009, 7, 4428. | 2.8 | 24 |
| 38 | Exploiting the cross-metathesis reaction in the synthesis of pseudo-oligosaccharides. <i>Organic and Biomolecular Chemistry</i> , 2009, 7, 2635. | 2.8 | 11 |
| 39 | Multivalent, Saccharide-Functionalized Gold Nanoparticles as Fully Synthetic Analogs of Type A <i>Neisseria meningitidis</i> Antigens. <i>Advanced Materials</i> , 2008, 20, 4348-4352. | 21.0 | 52 |
| 40 | Expeditious Synthesis of Water-Soluble, Monolayer-Protected Gold Nanoparticles of Controlled Size and Monolayer Composition. <i>Langmuir</i> , 2008, 24, 4120-4124. | 3.5 | 68 |
| 41 | HRMAS NMR analysis in neat ionic liquids: a powerful tool to investigate complex organic molecules and monitor chemical reactions. <i>Green Chemistry</i> , 2007, 9, 216. | 9.0 | 17 |
| 42 | Amphiphilic N-Glycosyl-thiocarbamoyl Cyclodextrins: Synthesis, Self-Assembly, and Fluorimetry of Recognition by <i>Lens culinaris</i> Lectin. <i>Biomacromolecules</i> , 2007, 8, 1851-1857. | 5.4 | 50 |
| 43 | Glucose-derived ionic liquids: exploring low-cost sources for novel chiral solvents. <i>Green Chemistry</i> , 2007, 9, 337. | 9.0 | 78 |
| 44 | Synthesis and Biological Evaluation of Phosphono Analogues of Capsular Polysaccharide Fragments from <i>Neisseria meningitidis</i> . <i>Chemistry - A European Journal</i> , 2007, 13, 6623-6635. | 3.3 | 46 |
| 45 | Simple Synthesis of Versatile Coumarin Scaffolds. <i>Synthetic Communications</i> , 2006, 36, 2203-2209. | 2.1 | 18 |
| 46 | Probing specific protein recognition by size-controlled glycosylated cyclodextrin nanoassemblies. <i>New Journal of Chemistry</i> , 2006, 30, 1662. | 2.8 | 40 |
| 47 | NMR evidence for the participation of triflated ionic liquids in glycosylation reaction mechanisms. <i>Carbohydrate Research</i> , 2006, 341, 903-908. | 2.3 | 40 |
| 48 | Cyclodextrin nanoaggregates and their assembly with protein: a spectroscopic investigation. <i>Nanotechnology</i> , 2006, 17, 3239-3244. | 2.6 | 18 |
| 49 | (\pm -L-Rhamnopyranosyl)methylphosphonic Acids: Experimental Evidence of the Analogy with \pm -L-Rhamnopyranosyl Phosphate. <i>European Journal of Organic Chemistry</i> , 2005, 2005, 4459-4463. | 2.4 | 3 |
| 50 | Synthesis of the Phosphono Analogue of the Dimeric Subunit of <i>Neisseria meningitidis</i> Type A Capsular Polysaccharide. <i>Synlett</i> , 2005, 2005, 1147-1151. | 1.8 | 1 |
| 51 | Glycosylation with Trichloroacetimidates in Ionic Liquids: Influence of the Reaction Medium on the Stereochemical Outcome. <i>Journal of Organic Chemistry</i> , 2005, 70, 7765-7768. | 3.2 | 68 |
| 52 | Efficient Synthesis of O-, S-, N- and C-Glycosides of 2-Amino-2-Deoxy-D-Glucopyranose from Glycosyl Iodides. <i>Synlett</i> , 2004, 2004, 0341-0343. | 1.8 | 1 |
| 53 | Efficient Synthesis of Unsymmetrical Ureido-Linked Disaccharides. <i>European Journal of Organic Chemistry</i> , 2004, 2004, 395-405. | 2.4 | 41 |
| 54 | Solution Synthesis of Two Orthogonally Protected Lactosides as Tetravalent Disaccharide-Based Scaffolds. <i>European Journal of Organic Chemistry</i> , 2004, 2004, 2853-2862. | 2.4 | 6 |

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|----|--|-----|-----------|
| 55 | Lipase-Catalysed Regioselective Acylations in Combination with Regioselective Glycosylations as a Strategy for the Synthesis of Oligosaccharides: Synthesis of a Series of Fucosyllactose Building Blocks. <i>European Journal of Organic Chemistry</i> , 2003, 2003, 1672-1680. | 2.4 | 8 |
| 56 | Chemical Contributions to Understanding Heparin Activity: Synthesis of Related Sulfated Oligosaccharides. <i>European Journal of Organic Chemistry</i> , 2003, 2003, 2999-3024. | 2.4 | 77 |
| 57 | Chemical Contributions to Understanding Heparin Activity: Synthesis of Related Sulfated Oligosaccharides. <i>ChemInform</i> , 2003, 34, no. | 0.0 | 0 |
| 58 | Trichloroacetimidates as Glycosyl Donors in Recyclable Ionic Liquids. <i>Synlett</i> , 2003, 2003, 2297-2300. | 1.8 | 32 |
| 59 | Minimal Heparin/Heparan Sulfate Sequences for Binding to Fibroblast Growth Factor-1. <i>Biochemical and Biophysical Research Communications</i> , 2002, 292, 222-230. | 2.1 | 52 |
| 60 | Synthesis of phosphorylated fragments of <i>Streptococcus pneumoniae</i> type 19F capsular polysaccharide. <i>Journal of the Chemical Society, Perkin Transactions 1</i> , 2002, , 2174-2181. | 1.3 | 10 |
| 61 | Synthesis of building blocks of human milk oligosaccharides. Fucosylated derivatives of the lacto- and neolacto-series. <i>Carbohydrate Research</i> , 2002, 337, 1333-1342. | 2.3 | 24 |
| 62 | Human milk oligosaccharides: an enzymatic protection step simplifies the synthesis of 3 α - and 6 α -O-sialyllactose and their analogues. <i>Carbohydrate Research</i> , 2002, 337, 473-483. | 2.3 | 15 |
| 63 | IMPROVEMENT ON LIPASE CATALYSED REGIOSELECTIVE O-ACYLATION OF LACTOSE: A CONVENIENT ROUTE TO 2 α -O-FUCOSYLLACTOSE. <i>Journal of Carbohydrate Chemistry</i> , 2001, 20, 761-765. | 1.1 | 10 |
| 64 | A Rational Approach to Heparin-Related Fragments - Synthesis of Differently Sulfated Tetrasaccharides as Potential Ligands for Fibroblast Growth Factors. <i>European Journal of Organic Chemistry</i> , 2001, 2001, 2727-2734. | 2.4 | 37 |
| 65 | Improvement of the Synthesis of Immunological Carbohydrate Vaccines Containing the Tumour Associate Antigen CaMBr1. <i>European Journal of Organic Chemistry</i> , 2001, 2001, 4331. | 2.4 | 4 |
| 66 | A CONVENIENT MULTIGRAM PREPARATION OF FUNCTIONALIZED 2-AZIDO-2-DEOXY-D-MANNOSE AS A USEFUL ORTHOGONALLY PROTECTED BUILDING BLOCK FOR OLIGOSACCHARIDE SYNTHESIS. <i>Journal of Carbohydrate Chemistry</i> , 2001, 20, 813-819. | 1.1 | 14 |
| 67 | Boranophosphate Diesters as Stable Synthetic Analogues of 1-O-Glycosylphosphates. <i>Tetrahedron</i> , 2000, 56, 4811-4815. | 1.9 | 18 |
| 68 | Regioselective lipase acylation as a useful tool for separation and selective protection of 1 β -d-Gal(1 \rightarrow 4)-d-GlcNAc and 1 β -d-Gal(1 \rightarrow 3)-d-GlcNAc disaccharides. <i>Tetrahedron: Asymmetry</i> , 2000, 11, 3647-3651. | 1.8 | 12 |
| 69 | Stereoselective synthesis of 1 \pm -C-glycosides of N-acetylgalactosamine. <i>Tetrahedron: Asymmetry</i> , 2000, 11, 295-303. | 1.8 | 27 |
| 70 | Easy Chemo-Enzymatic Synthesis of Human Milk Trisaccharides from a Common Selectively Protected Lactose Building Block. <i>Journal of Carbohydrate Chemistry</i> , 2000, 19, 331-343. | 1.1 | 10 |
| 71 | Synthesis of carboranyl derivatives of alkynyl glycosides as potential BNCT agents. <i>Tetrahedron</i> , 1999, 55, 14123-14136. | 1.9 | 78 |
| 72 | Synthesis of disaccharidic sub-units of a new series of heparin related oligosaccharides. <i>Tetrahedron</i> , 1999, 55, 9867-9880. | 1.9 | 33 |

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|----|--|-----|-----------|
| 73 | Conversion of Lactose into Mimics of N-Acetylglucosamine. <i>European Journal of Organic Chemistry</i> , 1999, 1999, 3437-3440. | 2.4 | 6 |
| 74 | Synthesis of N-acetylglucosamine containing Lewis A and Lewis X building blocks based on N-tetrachlorophthaloyl protection synthesis of Lewis X pentasaccharide. <i>Carbohydrate Research</i> , 1998, 310, 157-171. | 2.3 | 39 |
| 75 | Capsular polysaccharide of <i>Streptococcus pneumoniae</i> type 19F: synthesis of the repeating unit. <i>Carbohydrate Research</i> , 1998, 311, 171-181. | 2.3 | 57 |
| 76 | Synthesis of Lewis a and Lewis X Pentasaccharides Based on N-Trichloroethoxycarbonyl Protection. <i>Journal of Carbohydrate Chemistry</i> , 1998, 17, 739-758. | 1.1 | 28 |
| 77 | Synthetic Approach to Kdo Glycosides Via Exo-Glycal Epoxides and Rationalization of the Stereochemical Outcome. <i>Journal of Carbohydrate Chemistry</i> , 1998, 17, 1269-1281. | 1.1 | 9 |
| 78 | Stereoselective synthesis of the C-analogue of β -D-glucopyranosyl serine. <i>Chemical Communications</i> , 1997, , 1469-1470. | 4.1 | 40 |
| 79 | New and Easy Access to C-Glycosides of Glucosamine and Mannosamine. <i>Journal of Organic Chemistry</i> , 1997, 62, 6678-6681. | 3.2 | 85 |
| 80 | A simple access to lactose-derived building blocks required in glycoconjugate synthesis. <i>Carbohydrate Research</i> , 1997, 303, 39-49. | 2.3 | 19 |
| 81 | Stereoselective Synthesis of the Isosteric Phosphono Analogues of N-Acetyl- β -D-glucosamine 1-Phosphate and N-Acetyl- β -D-mannosamine 1-Phosphate. <i>Journal of Organic Chemistry</i> , 1996, 61, 3428-3432. | 3.2 | 49 |
| 82 | Regioselective acylation of disaccharides by enzymatic transesterification. <i>Carbohydrate Research</i> , 1996, 291, 197-204. | 2.3 | 26 |
| 83 | Synthesis of the disaccharides methyl 4-O-(2/3-O-sulfo- β -D-glucopyranosyluronic) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 347 Glycoconjugate <i>Journal</i> , 1996, 13, 995-1003. | 2.7 | 3 |
| 84 | Synthesis of azasugars by Grignard reaction on glycosylamines. <i>Tetrahedron</i> , 1995, 51, 4679-4690. | 1.9 | 62 |
| 85 | Identification of O-sulphate substituents on D-glucuronic acid units in heparin-related glycosaminoglycans using novel synthetic disaccharide standards. <i>Glycobiology</i> , 1995, 5, 807-811. | 2.5 | 14 |
| 86 | First synthesis of the phosphono analogue of N-acetyl- β -D-mannosamine 1-phosphate. <i>Journal of the Chemical Society Chemical Communications</i> , 1995, , 1993-1994. | 2.0 | 9 |
| 87 | Glycosyl sulfates as glycosyl donors. <i>Tetrahedron Letters</i> , 1994, 35, 8669-8670. | 1.4 | 12 |
| 88 | Synthesis of 3- and 4-deoxy derivatives of l-rhamnose from 1,2-O-(1-methoxyethylidene)- β -l-rhamnopyranose. <i>Carbohydrate Research</i> , 1994, 257, 317-322. | 2.3 | 7 |
| 89 | Oligosaccharides Related to Tumor-Associate Antigens. Part 2. Conformational analysis of the trisaccharide β -L-Fucp-(1 \rightarrow 2)- β -D-Galp-(1 \rightarrow 3)- β -D-GalpNAc, epitope structure recognized by the MBr1 antibody. <i>Helvetica Chimica Acta</i> , 1994, 77, 668-678. | 1.6 | 11 |
| 90 | Synthesis of antimetabolites of sucrose. <i>Journal of the Chemical Society Perkin Transactions 1</i> , 1994, , 333. | 0.9 | 12 |

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| 91 | A new procedure for the synthesis of azasugars. <i>Tetrahedron Letters</i> , 1993, 34, 4555-4558. | 1.4 | 48 |
| 92 | Synthesis of C-disaccharides through dimerization of exo-glycals. <i>Journal of Organic Chemistry</i> , 1992, 57, 1304-1306. | 3.2 | 48 |