Vesa-Pekka Lehto

List of Publications by Year
in descending order

129 papers	6,167 citations	41 h-index (71102)	74 g-index (76900)
131 all docs	131 docs citations	131 times ranked	6318 citing authors

#	Article	IF	Citations
1	Mesoporous silicon microparticles for oral drug delivery: Loading and release of five model drugs. Journal of Controlled Release, 2005, 108, 362-374.	9.9	497
2	Mesoporous Silicon in Drug Delivery Applications. Journal of Pharmaceutical Sciences, 2008, 97, 632-653.	3.3	398
3	Biocompatibility of Thermally Hydrocarbonized Porous Silicon Nanoparticles and their Biodistribution in Rats. ACS Nano, 2010, 4, 3023-3032.	14.6	316
4	Mesoporous systems for poorly soluble drugs. International Journal of Pharmaceutics, 2013, 453, 181-197.	5.2	196
5	In vitro cytotoxicity of porous silicon microparticles: Effect of the particle concentration, surface chemistry and size. Acta Biomaterialia, 2010, 6, 2721-2731.	8.3	158
6	Drug permeation across intestinal epithelial cells using porous silicon nanoparticles. Biomaterials, 2011, 32, 2625-2633.	11.4	157
7	Fabrication and chemical surface modification of mesoporous silicon for biomedical applications. Chemical Engineering Journal, 2008, 137, 162-172.	12.7	152
8	Predicting the Formation and Stability of Amorphous Small Molecule Binary Mixtures from Computationally Determined Floryâˆ’Huggins Interaction Parameter and Phase Diagram. Molecular Pharmaceutics, 2010, 7, 795-804.	4.6	145
9	Co-delivery of a hydrophobic small molecule and a hydrophilic peptide by porous silicon nanoparticles. Journal of Controlled Release, 2013, 170, 268-278.	9.9	141
10	Semimetallic TiO₂ Nanotubes. Angewandte Chemie - International Edition, 2009, 48, 7236-7239.	13.8	133
11	Failure of MTT as a Toxicity Testing Agent for Mesoporous Silicon Microparticles. Chemical Research in Toxicology, 2007, 20, 1913-1918.	3.3	129
12	Cell membrane coating integrity affects the internalization mechanism of biomimetic nanoparticles. Nature Communications, 2021, 12, 5726.	12.8	126
13	Carbon doping of self-organized TiO2nanotube layers by thermal acetylene treatment. Nanotechnology, 2007, 18, 105604.	2.6	121
14	Microfluidic Assembly of Monodisperse Multistage pHâ€Responsive Polymer/Porous Silicon Composites for Precisely Controlled Multiâ€Drug Delivery. Small, 2014, 10, 2029-2038.	10.0	105
15	The comparison of seven different methods to quantify the amorphous content of spray dried lactose. Powder Technology, 2006, 167, 85-93.	4.2	99
16	Multifunctional Porous Silicon for Therapeutic Drug Delivery and Imaging. Current Drug Discovery Technologies, 2011, 8, 228-249.	1.2	97
17	Challenges and prospects of nanosized silicon anodes in lithium-ion batteries. Nanotechnology, 2021, 32, 042002.	2.6	95
18	Cytotoxicity study of ordered mesoporous silica MCM-41 and SBA-15 microparticles on Caco-2 cells. European Journal of Pharmaceutics and Biopharmaceutics, 2010, 74, 483-494.	4.3	87

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19	Enhanced in vitro permeation of furosemide loaded into thermally carbonized mesoporous silicon (TCPSi) microparticles. European Journal of Pharmaceutics and Biopharmaceutics, 2007, 66, 348-356.	4.3	83
20	Surface Chemistry, Reactivity, and Pore Structure of Porous Silicon Oxidized by Various Methods. Langmuir, 2012, 28, 10573-10583.	3.5	82
21	Effect of isotonic solutions and peptide adsorption on zeta potential of porous silicon nanoparticle drug delivery formulations. International Journal of Pharmaceutics, 2012, 431, 230-236.	5.2	82
22	Mesoporous Silicon (PSi) for Sustained Peptide Delivery: Effect of PSi Microparticle Surface Chemistry on Peptide YY3-36 Release. Pharmaceutical Research, 2012, 29, 837-846.	3.5	79
23	Effect of particle morphology on the triboelectrification in dry powder inhalers. International Journal of Pharmaceutics, 2004, 282, 107-114.	5.2	76
24	Determination of the Physical State of Drug Molecules in Mesoporous Silicon with Different Surface Chemistries. Langmuir, 2009, 25, 6137-6142.	3.5	73
25	¹⁸F-Labeled Modified Porous Silicon Particles for Investigation of Drug Delivery Carrier Distribution in Vivo with Positron Emission Tomography. Molecular Pharmaceutics, 2011, 8, 1799-1806.	4.6	65
26	Development of Porous Silicon Nanocarriers for Parenteral Peptide Delivery. Molecular Pharmaceutics, 2013, 10, 353-359.	4.6	65
27	Smart Porous Silicon Nanoparticles with Polymeric Coatings for Sequential Combination Therapy. Molecular Pharmaceutics, 2015, 12, 4038-4047.	4.6	63
28	Novel Delivery Systems for Improving the Clinical Use of Peptides. Pharmacological Reviews, 2015, 67, 541-561.	16.0	62
29	Nanostructured porous silicon microparticles enable sustained peptide (Melanotan II) delivery. European Journal of Pharmaceutics and Biopharmaceutics, 2011, 77, 20-25.	4.3	61
30	Optical gas sensing properties of thermally hydrocarbonized porous silicon Bragg reflectors. Optics Express, 2009, 17, 5446.	3.4	60
31	Improved stability and biocompatibility of nanostructured silicon drug carrier for intravenous administration. Acta Biomaterialia, 2015, 13, 207-215.	8.3	60
32	Utilising thermoporometry to obtain new insights into nanostructured materials. Journal of Thermal Analysis and Calorimetry, 2011, 105, 811-821.	3.6	58
33	Temperature responsive porous silicon nanoparticles for cancer therapy â€“ spatiotemporal triggering through infrared and radiofrequency electromagnetic heating. Journal of Controlled Release, 2016, 241, 220-228.	9.9	58
34	Investigations on particle surface characteristics vs. dispersion behaviour of l-leucine coated carrier-free inhalable powders. International Journal of Pharmaceutics, 2010, 385, 79-85.	5.2	53
35	A kinetic study of polymorphic transition of anhydrous caffeine with microcalorimeter. Thermochimica Acta, 1998, 317, 47-58.	2.7	52
36	Functionalization of Mesoporous Silicon Nanoparticles for Targeting and Bioimaging Purposes. Journal of Nanomaterials, 2012, 2012, 1-9.	2.7	52

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37	Chlorin e6 Functionalized Theranostic Multistage Nanovectors Transported by Stem Cells for Effective Photodynamic Therapy. ACS Applied Materials & Interfaces, 2017, 9, 23441-23449.	8.0	51
38	Mesoporous systems for poorly soluble drugs â€“ recent trends. International Journal of Pharmaceutics, 2018, 536, 178-186.	5.2	51
39	Physicochemical stability of high indomethacin payload ordered mesoporous silica MCM-41 and SBA-15 microparticles. International Journal of Pharmaceutics, 2011, 416, 242-51.	5.2	50
40	Electrochemically anodized porous silicon: Towards simple and affordable anode material for Li-ion batteries. Scientific Reports, 2017, 7, 7880.	3.3	48
41	Dynamic solid-state and tableting properties of four theophylline forms. International Journal of Pharmaceutics, 2001, 217, 225-236.	5.2	46
42	Lactose modifications enhance its drug performance in the novel multiple dose TaifunÂ® DPI. European Journal of Pharmaceutical Sciences, 2002, 16, 313-321.	4.0	42
43	Effect of amorphicity on the triboelectrification of lactose powder. Journal of Electrostatics, 2002, 56, 103-110.	1.9	41
44	Utilising thermoporometry to obtain new insights into nanostructured materials. Journal of Thermal Analysis and Calorimetry, 2011, 105, 823-830.	3.6	41
45	Amine Surface Modifications and Fluorescent Labeling of Thermally Stabilized Mesoporous Silicon Nanoparticles. Journal of Physical Chemistry C, 2012, 116, 22307-22314.	3.1	41
46	Tailored Dual PEGylation of Inorganic Porous Nanocarriers for Extremely Long Blood Circulation in Vivo. ACS Applied Materials & Interfaces, 2016, 8, 32723-32731.	8.0	39
47	Depth Profiling of Compression-Induced Disorders and Polymorphic Transition on Tablet Surfaces with Grazing Incidence X-ray Diffraction. Pharmaceutical Research, 2006, 23, 813-820.	3.5	38
48	Systematic inÂvitro and inÂvivo study on porous silicon to improve the oral bioavailability of celecoxib. Biomaterials, 2015, 52, 44-55.	11.4	38
49	Cytotoxicity assessment of porous silicon microparticles for ocular drug delivery. European Journal of Pharmaceutics and Biopharmaceutics, 2016, 100, 1-8.	4.3	37
50	Effects of Ethanol to Water Ratio in Feed Solution on the Crystallinity of Spray-Dried Lactose. Drug Development and Industrial Pharmacy, 2002, 28, 949-955.	2.0	36
51	Phase Separation in Coamorphous Systems: <i>in Silico</i> Prediction and the Experimental Challenge of Detection. Molecular Pharmaceutics, 2014, 11, 2271-2279.	4.6	36
52	Scalable Synthesis of Biodegradable Black Mesoporous Silicon Nanoparticles for Highly Efficient Photothermal Therapy. ACS Applied Materials & Interfaces, 2018, 10, 23529-23538.	8.0	35
53	Crystal Structure Changes of Î³-cyclodextrin After the SEDS Process in Supercritical Carbon Dioxide Affect the Dissolution Rate of Complexed Budesonide. Pharmaceutical Research, 2007, 24, 1058-1066.	3.5	33
54	Quantitative Comparison of the Light-to-Heat Conversion Efficiency in Nanomaterials Suitable for Photothermal Therapy. ACS Applied Materials & Interfaces, 2022, 14, 33555-33566.	8.0	32

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55	Preparation of budesonide/Î³â€cyclodextrin complexes in supercritical fluids with a novel SEDS method. Journal of Pharmaceutical Sciences, 2006, 95, 2235-2245.	3.3	31
56	Conjugation with carbon nanotubes improves the performance of mesoporous silicon as Li-ion battery anode. Scientific Reports, 2020, 10, 5589.	3.3	31
57	Effects of carriers and storage of formulation on the lung deposition of a hydrophobic and hydrophilic drug from a DPI. International Journal of Pharmaceutics, 2003, 263, 151-163.	5.2	30
58	Effect of surface chemistry of porous silicon microparticles on glucagon-like peptide-1 (GLP-1) loading, release and biological activity. International Journal of Pharmaceutics, 2013, 454, 67-73.	5.2	30
59	Approaches to improve the biocompatibility and systemic circulation of inorganic porous nanoparticles. Journal of Materials Chemistry B, 2018, 6, 3632-3649.	5.8	30
60	Porous silicon micro- and nanoparticles for printed humidity sensors. Applied Physics Letters, 2012, 101, .	3.3	29
61	A Nanostopper Approach To Selectively Engineer the Surfaces of Mesoporous Silicon. Chemistry of Materials, 2014, 26, 6734-6742.	6.7	28
62	Porous Siliconâ€"Cell Penetrating Peptide Hybrid Nanocarrier for Intracellular Delivery of Oligonucleotides. Molecular Pharmaceutics, 2014, 11, 382-390.	4.6	28
63	Nano Air Seeds Trapped in Mesoporous Janus Nanoparticles Facilitate Cavitation and Enhance Ultrasound Imaging. ACS Applied Materials & Interfaces, 2017, 9, 35234-35243.	8.0	27
64	Recovery of uranium with bisphosphonate modified mesoporous silicon. Separation and Purification Technology, 2021, 272, 118913.	7.9	27
65	Improved production efficiency of mesoporous silicon nanoparticles by pulsed electrochemical etching. Powder Technology, 2016, 288, 360-365.	4.2	26
66	Water adsorption on plasma sprayed transition metal oxides. Applied Surface Science, 2005, 249, 115-126.	6.1	25
67	Atmospheric pressure chemical vapour synthesis of siliconâ€"carbon nanoceramics from hexamethyldisilane in high temperature aerosol reactor. Journal of Nanoparticle Research, 2011, 13, 4631-4645.	1.9	25
68	Toward Controlled Photothermal Treatment of Single Cell: Optically Induced Heating and Remote Temperature Monitoring In Vitro through Double Wavelength Optical Tweezers. ACS Photonics, 2017, 4, 1993-2002.	6.6	25
69	Endogenous Stable Radicals for Characterization of Thermally Carbonized Porous Silicon by Solid-State Dynamic Nuclear Polarization ¹³C NMR. Journal of Physical Chemistry C, 2015, 119, 19272-19278.	3.1	23
70	New approach for determining cartilage pore size distribution: NaCl-thermoporometry. Microporous and Mesoporous Materials, 2017, 241, 238-245.	4.4	23
71	Mechanical penetration of Î²-lactamâ€"resistant Gram-negative bacteria by programmable nanowires. Science Advances, 2020, 6, .	10.3	23
72	Determination of Amorphous Content of Lactose Samples by Solution Calorimetry. Drug Development and Industrial Pharmacy, 2004, 30, 809-815.	2.0	22

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73	Quantitative analysis of amorphous content of lactose using CCD-Raman spectroscopy. Journal of Pharmaceutical and Biomedical Analysis, 2005, 37, 907-911.	2.8	22
74	Dual Contrast CT Method Enables Diagnostics of Cartilage Injuries and Degeneration Using a Single CT Image. Annals of Biomedical Engineering, 2017, 45, 2857-2866.	2.5	22
75	Fabrication of Porous Silicon Based Humidity Sensing Elements on Paper. Journal of Sensors, 2015, 2015, 1-10.	1.1	21
76	Bisphosphonate modified mesoporous silicon for scandium adsorption. Microporous and Mesoporous Materials, 2020, 296, 109980.	4.4	21
77	Does the preferred orientation of crystallites in tablets affect the intrinsic dissolution?. Journal of Pharmaceutical and Biomedical Analysis, 2007, 43, 1315-1323.	2.8	19
78	Computational Approach for Fast Screening of Small Molecular Candidates To Inhibit Crystallization in Amorphous Drugs. Molecular Pharmaceutics, 2012, 9, 2844-2855.	4.6	19
79	Injected nanoparticles: The combination of experimental systems to assess cardiovascular adverse effects. European Journal of Pharmaceutics and Biopharmaceutics, 2014, 87, 64-72.	4.3	17
80	Cavitation Induced by Janus-Like Mesoporous Silicon Nanoparticles Enhances Ultrasound Hyperthermia. Frontiers in Chemistry, 2019, 7, 393.	3.6	17
81	Detecting amine vapours with thermally carbonized porous silicon gas sensor. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1769-1772.	0.8	16
82	Simultaneous determination of the heat and the quantity of vapor sorption using a novel microcalorimetric method. , 2000, 17, 701-706.		15
83	Facile synthesis of biocompatible superparamagnetic mesoporous nanoparticles for imageable drug delivery. Microporous and Mesoporous Materials, 2014, 195, 2-8.	4.4	15
84	Site-Specific 111In-Radiolabeling of Dual-PEGylated Porous Silicon Nanoparticles and Their In Vivo Evaluation in Murine 4T1 Breast Cancer Model. Pharmaceutics, 2019, 11, 686.	4.5	14
85	Low-Load Metal-Assisted Catalytic Etching Produces Scalable Porosity in Si Powders. ACS Applied Materials & Interfaces, 2020, 12, 48969-48981.	8.0	14
86	Cascading use of barley husk ash to produce silicon for composite anodes of Li-ion batteries. Materials Chemistry and Physics, 2020, 245, 122736.	4.0	14
87	Investigation of Solid Phase Composition on Tablet Surfaces by Grazing Incidence X-ray Diffraction. Pharmaceutical Research, 2012, 29, 134-144.	3.5	13
88	Synthesis and in vitro phantom NMR and MRI studies of fully organic free radicals, TEEPO-glucose and TEMPO-glucose, potential contrast agents for MRI. RSC Advances, 2015, 5, 15507-15510.	3.6	13
89	X-ray diffraction and microcalorimetry study of the Î±â†’Î² transformation of tripalmitin. Thermochimica Acta, 1996, 276, 229-242.	2.7	12
90	Designed inorganic porous nanovector with controlled release and MRI features for safe administration of doxorubicin. International Journal of Pharmaceutics, 2019, 554, 327-336.	5.2	12

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91	Self-standing mesoporous Si films as anodes for lithium-ion microbatteries. Journal of Power Sources, 2022, 529, 231269.	7.8	12
92	Real time detection of photoreactivity in pharmaceutical solids and solutions with isothermal microcalorimetry. Pharmaceutical Research, 1999, 16, 368-373.	3.5	11
93	Black Mesoporous Silicon as a Contrast Agent for LED-Based 3D Photoacoustic Tomography. ACS Applied Materials & Interfaces, 2020, 12, 5456-5461.	8.0	11
94	Stable surface functionalization of carbonized mesoporous silicon. Inorganic Chemistry Frontiers, 2020, 7, 631-641.	6.0	11
95	Controlling the Nature of Etched Si Nanostructures: High- versus Low-Load Metal-Assisted Catalytic Etching (MACE) of Si Powders. ACS Applied Materials & Interfaces, 2020, 12, 4787-4796.	8.0	11
96	Thermal dose as a universal tool to evaluate nanoparticle-induced photothermal therapy. International Journal of Pharmaceutics, 2020, 587, 119657.	5.2	11
97	Inorganic Nanomaterials for Photothermalâ€Based Cancer Theranostics. Advanced Therapeutics, 2021, 4, 2000207.	3.2	11
98	Production and stability of amorphous solid dispersions produced by a Freeze-drying method from DMSO. International Journal of Pharmaceutics, 2021, 606, 120902.	5.2	11
99	In Vitro Dissolution Methods for Hydrophilic and Hydrophobic Porous Silicon Microparticles. Pharmaceutics, 2011, 3, 315-325.	4.5	10
100	Nanocarriers and the delivered drug: Effect interference due to intravenous administration. European Journal of Pharmaceutical Sciences, 2014, 63, 96-102.	4.0	10
101	Optimisation of thermoporometry measurements to evaluate mesoporous organic and carbon xero-, cryo- and aerogels. Thermochimica Acta, 2015, 621, 81-89.	2.7	10
102	The atomic local ordering of SBA-15 studied with pair distribution function analysis, and its relationship to porous structure and thermal stability. Acta Materialia, 2019, 175, 341-347.	7.9	10
103	Triple Contrast CT Method Enables Simultaneous Evaluation of Articular Cartilage Composition and Segmentation. Annals of Biomedical Engineering, 2020, 48, 556-567.	2.5	10
104	Aerosol characterization and lung deposition of synthesized TiO2 nanoparticles for murine inhalation studies. Journal of Nanoparticle Research, 2011, 13, 2949-2961.	1.9	9
105	Special Issue on the recent trends in Thermal Analysis and Calorimetry in the European Region. Journal of Thermal Analysis and Calorimetry, 2015, 121, 1-5.	3.6	9
106	Experimental Evaluation of Radiation Response and Thermal Properties of NPs-Loaded Tissues-Mimicking Phantoms. Nanomaterials, 2022, 12, 945.	4.1	9
107	A kinetic study on crystallization of an amorphous lubricant. , 1997, 14, 899-904.		8
108	Low-temperature aerosol flow reactor method for preparation of surface stabilized pharmaceutical nanocarriers. Journal of Aerosol Science, 2011, 42, 645-656.	3.8	8

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109	Inorganic mesoporous particles for controlled Î±-linolenic acid delivery to stimulate GLP-1 secretion in vitro. European Journal of Pharmaceutics and Biopharmaceutics, 2019, 144, 132-138.	4.3	8
110	Characterization of the preferred orientation of Î´-mannitol crystallites in tablets. Journal of Pharmaceutical and Biomedical Analysis, 2004, 36, 559-564.	2.8	7
111	Effect of texture on the intrinsic dissolution behaviour of acetylsalicylic acid and tolbutamide compacts. Journal of Applied Crystallography, 2007, 40, 857-864.	4.5	7
112	Tailored Synthesis of PEGylated Bismuth Nanoparticles for X-ray Computed Tomography and Photothermal Therapy: One-Pot, Targeted Pyrolysis, and Self-Promotion. ACS Applied Materials & Interfaces, 2020, 12, 47233-47244.	8.0	7
113	Synthesis of graphene-like carbon from agricultural side stream with magnesiothermic reduction coupled with atmospheric pressure induction annealing. Nano Express, 2020, 1, 010014.	2.4	7
114	Rapid synthesis of nanostructured porous silicon carbide from biogenic silica. Journal of the American Ceramic Society, 2021, 104, 766-775.	3.8	6
115	Moisture transfer into medicament chambers equipped with a double-barrier-desiccant system. International Journal of Pharmaceutics, 2004, 275, 155-164.	5.2	5
116	Insights into the Evaporation Kinetics of Indomethacin Solutions. Chemical Engineering and Technology, 2013, 36, 1300-1306.	1.5	5
117	Assessment of the Relaxation-Enhancing Properties of a Nitroxide-Based Contrast Agent TEEPO-Glc with <i>In Vivo</i> Magnetic Resonance Imaging. Contrast Media and Molecular Imaging, 2019, 2019, 1-8.	0.8	5
118	Biogenic nanoporous silicon carrier improves the efficacy of buparvaquone against resistant visceral leishmaniasis. PLoS Neglected Tropical Diseases, 2021, 15, e0009533.	3.0	5
119	Comparison between Fluorescence Imaging and Elemental Analysis to Determine Biodistribution of Inorganic Nanoparticles with Strong Light Absorption. ACS Applied Materials & Interfaces, 2021, 13, 40392-40400.	8.0	5
120	Plant-based nanostructured silicon carbide modified with bisphosphonates for metal adsorption. Microporous and Mesoporous Materials, 2021, 324, 111294.	4.4	5
121	Dualâ€contrast microâ€CT enables cartilage lesion detection and tissue condition evaluation ex vivo. Equine Veterinary Journal, 2023, 55, 315-324.	1.7	5
122	Electrochemically induced bioactivity of porous silicon functionalized by acetylene. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1333-1338.	1.8	4
123	Colonic Delivery of Î±â€Linolenic Acid by an Advanced Nutrient Delivery System Prolongs Glucagonâ€Like Peptideâ€1 Secretion and Inhibits Food Intake in Mice. Molecular Nutrition and Food Research, 2022, 66, e2100978.	3.3	4
124	An Effective Desiccant System to Regulate the Humidity Inside the Chambers of the Solid Dosage Forms. Drug Development and Industrial Pharmacy, 2007, 33, 1233-1239.	2.0	3
125	Calorimetric determination of dissolution enthalpy with a novel flow-through method. Journal of Pharmaceutical and Biomedical Analysis, 2010, 53, 821-825.	2.8	3
126	Functionalized nanoporous silicon for extraction of Sc from a leach solution. Hydrometallurgy, 2022, , 105866.	4.3	2

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127	Recent Developments in Porous Silicon Nanovectors with Various Imaging Modalities in the Framework of Theranostics. ChemMedChem, 2022, 17, .	3.2	2
128	Porous Silicon in Drug Delivery Applications. Springer Series in Materials Science, 2015, , 163-185.	0.6	0
129	Injection Metal-Assisted Catalytic Etching (MACE) of Si Powder: Discovery of Low-Load MACE and Pore Distribution Tunability Using Ag, Au, Pd, Pt and Cu Catalysts. ECS Meeting Abstracts, 2020, MA2020-02, 1219-1219.	0.0	0