

# Lisa M Miller

## List of Publications by Year in descending order

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82  
papers

5,324  
citations

76326

40  
h-index

82547

72  
g-index

83  
all docs

83  
docs citations

83  
times ranked

6668  
citing authors

#	ARTICLE	IF	CITATIONS
1	Synchrotron-based infrared and X-ray imaging shows focalized accumulation of Cu and Zn co-localized with $\beta$ -amyloid deposits in Alzheimer's disease. <i>Journal of Structural Biology</i> , 2006, 155, 30-37.	2.8	521
2	Chemical imaging of biological tissue with synchrotron infrared light. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2006, 1758, 846-857.	2.6	324
3	FTIR spectroscopic imaging of protein aggregation in living cells. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2013, 1828, 2339-2346.	2.6	241
4	Low-level mechanical vibrations can influence bone resorption and bone formation in the growing skeleton. <i>Bone</i> , 2006, 39, 1059-1066.	2.9	218
5	The use of synchrotron infrared microspectroscopy in biological and biomedical investigations. <i>Vibrational Spectroscopy</i> , 2003, 32, 3-21.	2.2	204
6	In situ analysis of mineral content and crystallinity in bone using infrared micro-spectroscopy of the $\nu_2$ PO <sub>4</sub> <sup>3-</sup> vibration. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2001, 1527, 11-19.	2.4	201
7	Beta-amyloid deposition and Alzheimer's type changes induced by <i>Borrelia spirochetes</i> . <i>Neurobiology of Aging</i> , 2006, 27, 228-236.	3.1	172
8	Accretion of Bone Quantity and Quality in the Developing Mouse Skeleton. <i>Journal of Bone and Mineral Research</i> , 2007, 22, 1037-1045.	2.8	138
9	Acetylcholinesterase-Mediated Deacetylation of Pectin Impairs Cell Elongation, Pollen Germination, and Plant Reproduction. <i>Plant Cell</i> , 2012, 24, 50-65.	6.6	132
10	Increased brain iron coincides with early plaque formation in a mouse model of Alzheimer's disease. <i>NeuroImage</i> , 2011, 55, 32-38.	4.2	123
11	From structure to cellular mechanism with infrared microspectroscopy. <i>Current Opinion in Structural Biology</i> , 2010, 20, 649-656.	5.7	118
12	Amyloid plaques in PSAPP mice bind less metal than plaques in human Alzheimer's disease. <i>NeuroImage</i> , 2009, 47, 1215-1220.	4.2	117
13	Copper and Zinc Metallation Status of Copper-Zinc Superoxide Dismutase from Amyotrophic Lateral Sclerosis Transgenic Mice. <i>Journal of Biological Chemistry</i> , 2011, 286, 2795-2806.	3.4	112
14	Metal imaging in neurodegenerative diseases. <i>Metallomics</i> , 2012, 4, 721.	2.4	109
15	Chemical heterogeneity in cell death: Combined synchrotron IR and fluorescence microscopy studies of single apoptotic and necrotic cells. <i>Biopolymers</i> , 2003, 72, 366-373.	2.4	107
16	Identification of Conformational Substates Involved in Nitric Oxide Binding to Ferric and Ferrous Myoglobin through Difference Fourier Transform Infrared Spectroscopy (FTIR). <i>Biochemistry</i> , 1997, 36, 12199-12207.	2.5	104
17	Amifostine, a radioprotectant agent, protects rat brain tissue lipids against ionizing radiation induced damage: An FTIR microspectroscopic imaging study. <i>Archives of Biochemistry and Biophysics</i> , 2012, 520, 67-73.	3.0	101
18	Synchrotrons versus globars, point-detectors versus focal plane arrays: Selecting the best source and detector for specific infrared microspectroscopy and imaging applications. <i>Vibrational Spectroscopy</i> , 2005, 38, 237-240.	2.2	97

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19	Tissue mineralization is increased following 1-year treatment with high doses of bisphosphonates in dogs. <i>Bone</i> , 2003, 33, 960-969.	2.9	93
20	FTIR-microspectroscopy of prion-infected nervous tissue. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2006, 1758, 948-959.	2.6	77
21	In situ examination of the time-course for secondary mineralization of Haversian bone using synchrotron Fourier transform infrared microspectroscopy. <i>Matrix Biology</i> , 2008, 27, 34-41.	3.6	77
22	Combining high-resolution micro-computed tomography with material composition to define the quality of bone tissue. <i>Current Osteoporosis Reports</i> , 2003, 1, 11-19.	3.6	76
23	Rapid alignment of nanotomography data using joint iterative reconstruction and reprojection. <i>Scientific Reports</i> , 2017, 7, 11818.	3.3	75
24	In situ identification of protein structural changes in prion-infected tissue. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2003, 1639, 152-158.	3.8	72
25	In situ chemistry of osteoporosis revealed by synchrotron infrared microspectroscopy. <i>Bone</i> , 2003, 33, 514-521.	2.9	72
26	Determination of the oxidation states of manganese in brain, liver, and heart mitochondria. <i>Journal of Neurochemistry</i> , 2004, 88, 266-280.	3.9	71
27	Strontium ranelate does not stimulate bone formation in ovariectomized rats. <i>Osteoporosis International</i> , 2008, 19, 1331-1341.	3.1	69
28	Fourier Transform Infrared Imaging Showing Reduced Unsaturated Lipid Content in the Hippocampus of a Mouse Model of Alzheimer's Disease. <i>Analytical Chemistry</i> , 2010, 82, 2711-2716.	6.5	68
29	Comparison of Fourier transform infrared (FTIR) spectra of individual cells acquired using synchrotron and conventional sources. <i>Infrared Physics and Technology</i> , 2004, 45, 331-338.	2.9	64
30	Changes in intracortical microporosities induced by pharmaceutical treatment of osteoporosis as detected by high resolution micro-CT. <i>Bone</i> , 2012, 50, 596-604.	2.9	63
31	Enhancing digestibility and ethanol yield of Populus wood via expression of an engineered monoglucosyltransferase. <i>Nature Communications</i> , 2016, 7, 11989.	12.8	61
32	Deletion of Cx43 from Osteocytes Results in Defective Bone Material Properties but Does Not Decrease Extrinsic Strength in Cortical Bone. <i>Calcified Tissue International</i> , 2012, 91, 215-224.	3.1	57
33	Chemical makeup of microdamaged bone differs from undamaged bone. <i>Bone</i> , 2006, 39, 318-324.	2.9	55
34	Metal-deficient aggregates and diminished copper found in cells expressing SOD1 mutations that cause ALS. <i>Frontiers in Aging Neuroscience</i> , 2014, 6, 110.	3.4	52
35	Elevated copper in the amyloid plaques and iron in the cortex are observed in mouse models of Alzheimer's disease that exhibit neurodegeneration. <i>Biomedical Spectroscopy and Imaging</i> , 2013, 2, 129-139.	1.2	50
36	In vitro efficiency and mechanistic role of indocyanine green as photodynamic therapy agent for human melanoma. <i>Photodiagnosis and Photodynamic Therapy</i> , 2009, 6, 105-116.	2.6	49

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37	Compositional characterization and imaging of "cell-wall-bound" acylesters of <i>Populus trichocarpa</i> reveal differential accumulation of acyl molecules in normal and reactive woods. <i>Planta</i> , 2008, 229, 15-24.	3.2	45
38	Alterations in mineral composition observed in osteoarthritic joints of cynomolgus monkeys. <i>Bone</i> , 2004, 35, 498-506.	2.9	44
39	Imaging the Material Properties of Bone Specimens Using Reflection-Based Infrared Microspectroscopy. <i>Analytical Chemistry</i> , 2012, 84, 3607-3613.	6.5	43
40	Combining IR spectroscopy with fluorescence imaging in a single microscope: Biomedical applications using a synchrotron infrared source (invited). <i>Review of Scientific Instruments</i> , 2002, 73, 1357-1360.	1.3	42
41	Infrared imaging of compositional changes in inflammatory cardiomyopathy. <i>Vibrational Spectroscopy</i> , 2005, 38, 217-222.	2.2	42
42	Bisphosphonates do not alter the rate of secondary mineralization. <i>Bone</i> , 2011, 49, 701-705.	2.9	42
43	In situ characterization of prion protein structure and metal accumulation in scrapie-infected cells by synchrotron infrared and X-ray imaging. <i>Vibrational Spectroscopy</i> , 2005, 38, 61-69.	2.2	41
44	Low frequency vibrations of amino acid homopolymers observed by synchrotron far-ir absorption spectroscopy: Excited state effects dominate the temperature dependence of the spectra. <i>Biopolymers</i> , 1999, 49, 591-603.	2.4	40
45	Altered Composition of Bone as Triggered by Irradiation Facilitates the Rapid Erosion of the Matrix by Both Cellular and Physicochemical Processes. <i>PLoS ONE</i> , 2013, 8, e64952.	2.5	39
46	Bone Matrix Quality After Sclerostin Antibody Treatment. <i>Journal of Bone and Mineral Research</i> , 2014, 29, 1597-1607.	2.8	38
47	XANES Spectroscopy: A Promising Tool for Toxicology. <i>NeuroToxicology</i> , 2002, 23, 127-146.	3.0	37
48	Determining the oxidation states of manganese in NT2 cells and cultured astrocytes. <i>Neurobiology of Aging</i> , 2006, 27, 1816-1826.	3.1	36
49	Dynamic Full-Field Infrared Imaging with Multiple Synchrotron Beams. <i>Analytical Chemistry</i> , 2013, 85, 3599-3605.	6.5	36
50	Characterization of Protein Structural Changes in Living Cells Using Time-Lapsed FTIR Imaging. <i>Analytical Chemistry</i> , 2015, 87, 6025-6031.	6.5	35
51	A new sample substrate for imaging and correlating organic and trace metal composition in biological cells and tissues. <i>Analytical and Bioanalytical Chemistry</i> , 2007, 387, 1705-1715.	3.7	33
52	Determining the oxidation states of manganese in PC12 and nerve growth factor-induced PC12 cells. <i>Free Radical Biology and Medicine</i> , 2005, 39, 164-181.	2.9	32
53	Following matrix metalloproteinases activity near the cell boundary by infrared micro-spectroscopy. <i>Matrix Biology</i> , 2002, 21, 567-577.	3.6	29
54	Overexpression of DMP1 accelerates mineralization and alters cortical bone biomechanical properties in vivo. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012, 5, 1-8.	3.1	28

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55	X-ray Fluorescence Nanotomography of Single Bacteria with a Sub-15-nm Beam. <i>Scientific Reports</i> , 2018, 8, 13415.	3.3	28
56	Lanthanide-Binding Tags for 3D X-ray Imaging of Proteins in Cells at Nanoscale Resolution. <i>Journal of the American Chemical Society</i> , 2020, 142, 2145-2149.	13.7	27
57	Synchrotron Infrared Microspectroscopy Detecting the Evolution of Huntington's Disease Neuropathology and Suggesting Unique Correlates of Dysfunction in White versus Gray Brain Matter. <i>Analytical Chemistry</i> , 2011, 83, 7712-7720.	6.5	23
58	Alterations in Collagen and Mineral Nanostructure Observed in Osteoporosis and Pharmaceutical Treatments Using Simultaneous Small- and Wide-Angle X-ray Scattering. <i>Calcified Tissue International</i> , 2014, 95, 446-456.	3.1	21
59	Changes in protein structure and distribution observed at pre-clinical stages of scrapie pathogenesis. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2008, 1782, 559-565.	3.8	20
60	Interpretation of solution scattering data from lipid nanodiscs. <i>Journal of Applied Crystallography</i> , 2018, 51, 157-166.	4.5	19
61	Misfolded opsin mutants display elevated $\beta$ -sheet structure. <i>FEBS Letters</i> , 2015, 589, 3119-3125.	2.8	18
62	Time-resolved X-ray absorption spectroscopy on microsecond timescales: Implications for the examination of structural motions. <i>Review of Scientific Instruments</i> , 1993, 64, 2035-2036.	1.3	16
63	Copper accumulation and the effect of chelation treatment on cerebral amyloid angiopathy compared to parenchymal amyloid plaques. <i>Metallomics</i> , 2020, 12, 539-546.	2.4	16
64	Biophysical and Structural Characterization of a Sequence-diverse Set of Solute-binding Proteins for Aromatic Compounds. <i>Journal of Biological Chemistry</i> , 2012, 287, 23748-23756.	3.4	15
65	Design and implementation of a rapid-mixer flow cell for time-resolved infrared microspectroscopy. <i>Review of Scientific Instruments</i> , 2000, 71, 4057.	1.3	14
66	Imaging Nutrient Distribution in the Rhizosphere Using FTIR Imaging. <i>Analytical Chemistry</i> , 2017, 89, 4831-4837.	6.5	12
67	Applications of infrared microspectroscopy to geology, biology and cosmetics. <i>Synchrotron Radiation News</i> , 1998, 11, 31-37.	0.8	10
68	The use of synchrotron infrared microspectroscopy in the assessment of cutaneous T-cell lymphoma vs. pityriasis lichenoides chronica. <i>Photodermatology Photoimmunology and Photomedicine</i> , 2010, 26, 93-97.	1.5	10
69	Bone Matrix Composition Following PTH Treatment is Not Dependent on Sclerostin Status. <i>Calcified Tissue International</i> , 2016, 98, 149-157.	3.1	8
70	Analysis of bone protein and mineral composition in bone disease using synchrotron infrared microspectroscopy. , 1999, , .		7
71	Fourier Transform Infrared Imaging as a Tool to Chemically and Spatially Characterize Matrix-Mineral Deposition in Osteoblasts. <i>Calcified Tissue International</i> , 2013, 92, 50-58.	3.1	7
72	Copper stabilizes antiparallel $\beta$ -sheet fibrils of the amyloid A $\beta$ 40 (A $\beta$ 40)-Iowa variant. <i>Journal of Biological Chemistry</i> , 2020, 295, 8914-8927.	3.4	7

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73	Development and applications of an epifluorescence module for synchrotron x-ray fluorescence microprobe imaging. <i>Review of Scientific Instruments</i> , 2005, 76, 066107.	1.3	6
74	Synchrotron infrared microspectroscopy as a means of studying the chemical composition of bone: applications to osteoarthritis. , 1997, , .		5
75	HBM Mice Have Altered Bone Matrix Composition and Improved Material Toughness. <i>Calcified Tissue International</i> , 2016, 99, 384-395.	3.1	5
76	Technical Report: The Diversity of Infrared Programs at the NSLS. <i>Synchrotron Radiation News</i> , 2007, 20, 25-34.	0.8	2
77	Infrared spectroscopy and imaging for understanding neurodegenerative protein-misfolding diseases. , 2020, , 121-142.		2
78	Discrimination Between Paraffin-Embedded and Frozen Skin Sections Using Synchrotron Infrared Microspectroscopy. <i>International Journal of Peptide Research and Therapeutics</i> , 2014, 20, 13-17.	1.9	1
79	<i>In situ</i> examination of osteoblast biomineralization on sulfonated polystyrene-modified substrates using Fourier transform infrared microspectroscopy. <i>Biointerphases</i> , 2017, 12, 031001.	1.6	1
80	Amide 1 Expression in Psoriasis and Lichen Planus using Synchrotron Infrared Microspectroscopy. <i>International Journal of Peptide Research and Therapeutics</i> , 2013, 19, 203-207.	1.9	0
81	Biochemical Changes Observed After PUVA Versus PUVA Plus Methotrexate Therapy in Mycosis Fungoides Using Synchrotron Infrared Microspectroscopy. <i>International Journal of Peptide Research and Therapeutics</i> , 2013, 19, 209-215.	1.9	0
82	Infrared Spectroscopy Using Synchrotron Radiation. , 2018, , 1-9.		0