Carlo Lamberti

List of Publications by Citations

452 papers	31,191 citations	90 h-index	161 g-index
472 ext. papers	33,953 ext. citations	6.5 avg, IF	6.93 L-index

#	Paper	IF	Citations
452	A new zirconium inorganic building brick forming metal organic frameworks with exceptional stability. *Journal of the American Chemical Society*, **2008**, 130, 13850-1	16.4	4225
451	Disclosing the Complex Structure of UiO-66 Metal Organic Framework: A Synergic Combination of Experiment and Theory. *Chemistry of Materials*, **2011**, 23, 1700-1718	9.6	1079
450	Local Structure of Framework Cu(II) in HKUST-1 Metallorganic Framework: Spectroscopic Characterization upon Activation and Interaction with Adsorbates. *Chemistry of Materials*, **2006**, 18, 1337-1346	9.6	555
449	The inconsistency in adsorption properties and powder XRD data of MOF-5 is rationalized by framework interpenetration and the presence of organic and inorganic species in the nanocavities. *Journal of the American Chemical Society*, **2007**, 129, 3612-20	16.4	503
448	Structure and Reactivity of Framework and Extraframework Iron in Fe-Silicalite as Investigated by Spectroscopic and Physicochemical Methods. *Journal of Catalysis*, **1996**, 158, 486-501	7.3	503
447	Reactivity of surface species in heterogeneous catalysts probed by in situ X-ray absorption techniques. *Chemical Reviews*, **2013**, 113, 1736-850	68.1	481
446	Tuned to Perfection: Ironing Out the Defects in Metal Organic Framework UiO-66. *Chemistry of Materials*, **2014**, 26, 4068-4071	9.6	472
445	Electronic and vibrational properties of a MOF-5 metal-organic framework: ZnO quantum dot behaviour. *Chemical Communications*, **2004**, 2300-1	5.8	381
444	The structure of active centers and the ethylene polymerization mechanism on the Cr/SiO2 catalyst: a frontier for the characterization methods. *Chemical Reviews*, **2005**, 105, 115-84	68.1	359
443	Probing the surfaces of heterogeneous catalysts by in situ IR spectroscopy. *Chemical Society Reviews*, **2010**, 39, 4951-5001	58.5	354
442	H2 storage in isostructural UiO-67 and UiO-66 MOFs. *Physical Chemistry Chemical Physics*, **2012**, 14, 1614-26	3.6	339
441	XAFS Study of Ti-Silicalite: Structure of Framework Ti(IV) in the Presence and Absence of Reactive Molecules (H2O, NH3) and Comparison with Ultraviolet-Visible and IR Results. *The Journal of Physical Chemistry*, **1994**, 98, 4125-4132		336
440	Adsorption properties of HKUST-1 toward hydrogen and other small molecules monitored by IR. *Physical Chemistry Chemical Physics*, **2007**, 9, 2676-85	3.6	321
439	A Consistent Reaction Scheme for the Selective Catalytic Reduction of Nitrogen Oxides with Ammonia. *ACS Catalysis*, **2015**, 5, 2832-2845	13.1	319
438	Vibrational structure of titanium silicate catalysts. A spectroscopic and theoretical study. *Journal of the American Chemical Society*, **2001**, 123, 11409-19	16.4	318
437	XAFS, IR, and UV Vis Study of the CuI Environment in CuI-ZSM-5. *Journal of Physical Chemistry B*, **1997**, 101, 344-360	3.4	303
436	Revisiting the nature of Cu sites in the activated Cu-SSZ-13 catalyst for SCR reaction. *Chemical Science*, **2015**, 6, 548-563	9.4	265

435	Characterization of Cu-exchanged SSZ-13: a comparative FTIR, UV-Vis, and EPR study with Cu-ZSM-5 and Cu-[illegible]with similar Si/Al and Cu/Al ratios. *Dalton Transactions*, **2013**, 42, 12741-61	4.3	247
434	Probing zeolites by vibrational spectroscopies. *Chemical Society Reviews*, **2015**, 44, 7262-341	58.5	241
433	XRD, XAS, and IR Characterization of Copper-Exchanged Y Zeolite. *Journal of Physical Chemistry B*, **2000**, 104, 8641-8651	3.4	223
432	Detailed Structure Analysis of Atomic Positions and Defects in Zirconium Metal[illegible]Organic Frameworks. *Crystal Growth and Design*, **2014**, 14, 5370-5372	3.5	219
431	Oxidation States of Copper Ions in ZSM-5 Zeolites. A Multitechnique Investigation. *Journal of Physical Chemistry B*, **2000**, 104, 4064-4073	3.4	218
430	Interaction of NH3 with Cu-SSZ-13 Catalyst: A Complementary FTIR, XANES, and XES Study. *Journal of Physical Chemistry Letters*, **2014**, 5, 1552-9	6.4	209
429	Structure and nuclearity of active sites in Fe-zeolites: comparison with iron sites in enzymes and homogeneous catalysts. *Physical Chemistry Chemical Physics*, **2007**, 9, 3483-99	3.6	207
428	Methane to Methanol: Structure-Activity Relationships for Cu-CHA. *Journal of the American Chemical Society*, **2017**, 139, 14961-14975	16.4	202
427	Metal-organic frameworks: structure, properties, methods of synthesis and characterization. *Russian Chemical Reviews*, **2016**, 85, 280-307	6.8	198
426	The Cu-CHA deNOx Catalyst in Action: Temperature-Dependent NH3-Assisted Selective Catalytic Reduction Monitored by Operando XAS and XES. *Journal of the American Chemical Society*, **2016**, 138, 12025-8	16.4	197
425	Advanced X-ray absorption and emission spectroscopy: in situ catalytic studies. *Chemical Society Reviews*, **2010**, 39, 4754-66	58.5	193
424	Carbon monoxide MgO from dispersed solids to single crystals: a review and new advances. *Progress in Surface Science*, **2004**, 76, 71-146	6.6	193
423	Interaction of Pyridine with Acidic (H-ZSM5, H-[illegible]H-MORD Zeolites) and Superacidic (H-Nafion Membrane) Systems: An IR Investigation. *Langmuir*, **1996**, 12, 930-940	4	193
422	Liquid hydrogen in protonic chabazite. *Journal of the American Chemical Society*, **2005**, 127, 6361-6	16.4	189
421	Acidic Properties of H[illegible]Zeolite As Probed by Bases with Proton Affinity in the 118[illegible]204 kcal mol-1 Range: A FTIR Investigation. *Journal of Physical Chemistry B*, **1997**, 101, 4740-4751	3.4	187
420	Ti-Peroxo Species in the TS-1/H2O2/H2O System. *Journal of Physical Chemistry B*, **2004**, 108, 3573-3583	3.4	180
419	Time-resolved in situ studies of oxygen intercalation into SrCoO2.5, performed by neutron diffraction and X-ray absorption spectroscopy. *Journal of the American Chemical Society*, **2006**, 128, 13161-74	16.4	179
418	Reactivity of Ti(IV) species hosted in TS-1 towards H2O2-H2O solutions investigated by ab initio cluster and periodic approaches combined with experimental XANES and EXAFS data: a review and new highlights. *Physical Chemistry Chemical Physics*, **2007**, 9, 4854-78	3.6	176

417	Local Structure of CPO-27-Ni Metallorganic Framework upon Dehydration and Coordination of NO. *Chemistry of Materials*, **2008**, 20, 4957-4968	9.6	174
416	Structural determination of a highly stable metal-organic framework with possible application to interim radioactive waste scavenging: Hf-UiO-66. *Physical Review B*, **2012**, 86,	3.3	165
415	Structural characterization of Ti centres in Ti-silicalite and reaction mechanisms in cyclohexanone ammoximation. *Catalysis Today*, **1996**, 32, 97-106	5.3	165
414	Ti location in the MFI framework of Ti-Silicalite-1: a neutron powder diffraction study. *Journal of the American Chemical Society*, **2001**, 123, 2204-12	16.4	163
413	Evidence of the Presence of Two Different Framework Ti(IV) Species in Ti-Silicalite-1 in Vacuo Conditions: an EXAFS and a Photoluminescence Study. *Journal of Physical Chemistry B*, **1998**, 102, 6382-6390	3.4	162
412	On the Structure of the Active Site of Ti-Silicalite in Reactions with Hydrogen Peroxide: A Vibrational and Computational Study. *Journal of Catalysis*, **1998**, 179, 64-71	7.3	158
411	Determination of the oxidation and coordination state of copper on different Cu-based catalysts by XANES spectroscopy in situ or in operando conditions. *Physical Chemistry Chemical Physics*, **2003**, 5, 4502-4509	3.6	152
410	Insights into Adsorption of NH3 on HKUST-1 Metal−Organic Framework: A Multitechnique Approach. *Journal of Physical Chemistry C*, **2012**, 116, 19839-19850	3.8	149
409	Enhancement of the ETS-10 titanosilicate activity in the shape-selective photocatalytic degradation of large aromatic molecules by controlled defect production. *Journal of the American Chemical Society*, **2003**, 125, 2264-71	16.4	141
408	Evolution of Extraframework Iron Species in Fe Silicalite. *Journal of Catalysis*, **2002**, 208, 64-82	7.3	140
407	The structure of the peroxo species in the TS-1 catalyst as investigated by resonant Raman spectroscopy. *Angewandte Chemie - International Edition*, **2002**, 41, 4734-7	16.4	139
406	Cu-CHA - a model system for applied selective redox catalysis. *Chemical Society Reviews*, **2018**, 47, 8097-8133	38.3	138
405	Fourier-Transform Infrared Study of CO Adsorbed at 77 K on H-Mordenite and Alkali-Metal-Exchanged Mordenites. *Langmuir*, **1995**, 11, 527-533	4	138
404	Optimized Finite Difference Method for the Full-Potential XANES Simulations: Application to Molecular Adsorption Geometries in MOFs and Metal-Ligand Intersystem Crossing Transients. *Journal of Chemical Theory and Computation*, **2015**, 11, 4512-21	6.4	137
403	Thermal Reduction of Cu2+ in Mordenite and Re-oxidation upon Interaction with H2O, O2, and NO. *Journal of Physical Chemistry B*, **2003**, 107, 7036-7044	3.4	135
402	In situ XAS and XRPD parametric rietveld refinement to understand dealumination of Y zeolite catalyst. *Journal of the American Chemical Society*, **2010**, 132, 667-78	16.4	134
401	Hydroxyls nests in defective silicalites and strained structures derived upon dehydroxylation: vibrational properties and theoretical modelling. *Topics in Catalysis*, **2001**, 15, 43-52	2.3	134
400	Composition-driven Cu-speciation and reducibility in Cu-CHA zeolite catalysts: a multivariate XAS/FTIR approach to complexity. *Chemical Science*, **2017**, 8, 6836-6851	9.4	129

399	Low-Temperature Fourier Transform Infrared Study of the Interaction of CO with Cations in Alkali-Metal Exchanged ZSM-5 Zeolites. *The Journal of Physical Chemistry*, **1994**, 98, 9577-9582		128
398	Cubic octanuclear Ni(II) clusters in highly porous polypyrazolyl-based materials. *Journal of the American Chemical Society*, **2010**, 132, 7902-4	16.4	126
397	Effect of Benzoic Acid as a Modulator in the Structure of UiO-66: An Experimental and Computational Study. *Journal of Physical Chemistry C*, **2017**, 121, 9312-9324	3.8	125
396	Surface acidity and basicity: General concepts. *Catalysis Today*, **1998**, 41, 169-177	5.3	125
395	Low temperature CO adsorption on Na-ZSM-5 zeolites: An FTIR investigation. *Journal of Catalysis*, **1992**, 137, 179-185	7.3	124
394	The Nuclearity of the Active Site for Methane to Methanol Conversion in Cu-Mordenite: A Quantitative Assessment. *Journal of the American Chemical Society*, **2018**, 140, 15270-15278	16.4	123
393	Assessing the acidity of high silica chabazite H-SSZ-13 by FTIR using CO as molecular probe: Comparison with H-SAPO-34. *Journal of Physical Chemistry B*, **2005**, 109, 2779-84	3.4	122
392	CO Adsorption on CPO-27-Ni Coordination Polymer: Spectroscopic Features and Interaction Energy. *Journal of Physical Chemistry C*, **2009**, 113, 3292-3299	3.8	114
391	The architecture of catalytically active centers in titanosilicate (TS-1) and related selective-oxidation catalysts. *Physical Chemistry Chemical Physics*, **2000**, 2, 4812-4817	3.6	114
390	Functionalization of UiO-66 Metal□Organic Framework and Highly Cross-Linked Polystyrene with Cr(CO)3: In Situ Formation, Stability, and Photoreactivity. *Chemistry of Materials*, **2010**, 22, 4602-4611	9.6	113
389	X-ray absorption spectroscopies: useful tools to understand metallorganic frameworks structure and reactivity. *Chemical Society Reviews*, **2010**, 39, 4885-927	58.5	112
388	The chemistry of the oxychlorination catalyst: an in situ, time-resolved XANES study. *Angewandte Chemie - International Edition*, **2002**, 41, 2341-4	16.4	112
387	Determination of the Particle Size, Available Surface Area, and Nature of Exposed Sites for Silica□Alumina-Supported Pd Nanoparticles: A Multitechnical Approach. *Journal of Physical Chemistry C*, **2009**, 113, 10485-10492	3.8	109
386	Cation Location in Dehydrated Na□Rb□ Zeolite: An XRD and IR Study. *Journal of Physical Chemistry B*, **1997**, 101, 10653-10660	3.4	107
385	Comparative IR-spectroscopic study of low-temperature H2 and CO adsorption on Na zeolites. *Journal of the Chemical Society, Faraday Transactions*, **1994**, 90, 3367-3372		105
384	The vibrational spectroscopy of H2, N2, CO and NO adsorbed on the titanosilicate molecular sieve ETS-10. *Physical Chemistry Chemical Physics*, **1999**, 1, 1649-1657	3.6	103
383	Structural Characterization of Ti-Silicalite-1: A Synchrotron Radiation X-Ray Powder Diffraction Study. *Journal of Catalysis*, **1999**, 183, 222-231	7.3	103
382	Neutron powder diffraction study of orthorhombic and monoclinic defective silicalite. *Acta Crystallographica Section B: Structural Science*, **2000**, 56 (Pt 1), 2-10		102

381	Characterisation of defective silicalites. *Dalton Transactions RSC*, **2000**, 3921-3929		102
380	N2 Adsorption at 77 K on H-Mordenite and Alkali-Metal-Exchanged Mordenites: An IR Study. *The Journal of Physical Chemistry*, **1995**, 99, 11167-11177		101
379	Interaction of CD3CN and Pyridine with the Ti(IV) Centers of TS-1 Catalysts: a Spectroscopic and Computational Study. *Langmuir*, **2003**, 19, 2155-2161	4	99
378	Cr-MIL-101 encapsulated Keggin phosphotungstic acid as active nanomaterial for catalysing the alcoholysis of styrene oxide. *Green Chemistry*, **2014**, 16, 1351-1357	10	98
377	Effect of Interaction with H2O and NH3 on the Vibrational, Electronic, and Energetic Peculiarities of Ti(IV) Centers TS-1 Catalysts: A Spectroscopic and Computational Study. *Journal of Physical Chemistry B*, **2002**, 106, 9892-9905	3.4	96
376	Probing Reactive Platinum Sites in UiO-67 Zirconium Metal□Organic Frameworks. *Chemistry of Materials*, **2015**, 27, 1042-1056	9.6	95
375	Low-dimensional systems investigated by x-ray absorption spectroscopy: a selection of 2D, 1D and 0D cases. *Journal Physics D: Applied Physics*, **2013**, 46, 423001	3	94
374	Quantum-size effects in the titanosilicate molecular sieve. *Applied Physics Letters*, **1997**, 71, 2319-2321	3.4	93
373	FTIR study of the interaction of CO with pure and silica-supported copper(I) oxide. *Surface Science*, **1998**, 411, 272-285	1.8	93
372	(I(2))(n) encapsulation inside TiO(2): a way to tune photoactivity in the visible region. *Journal of the American Chemical Society*, **2007**, 129, 2822-8	16.4	93
371	Hydrogen storage in Chabazite zeolite frameworks. *Physical Chemistry Chemical Physics*, **2005**, 7, 3197-203	3.6	93
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369	In situ, Cr K-edge XAS study on the Phillips catalyst: activation and ethylene polymerization. *Journal of Catalysis*, **2005**, 230, 98-108	7.3	93
368	Lateral interactions in CO adlayers on prismatic ZnO faces: a FTIR and HRTEM study. *Surface Science* , **1992**, 276, 281-298	1.8	93
367	Mono-, Di-, and Tricarbonylic Species in Copper(I)-Exchanged Zeolite ZSM-5: Comparison with Homogeneous Copper(I) Carbonylic Structures. *Journal of Physical Chemistry B*, **1999**, 103, 3833-3844	3.4	92
366	FTIR adsorption studies of H2O and CH3OH in the isostructural H-SSZ-13 and H-SAPO-34: formation of H-bonded adducts and protonated clusters. *Journal of Physical Chemistry B*, **2005**, 109, 7724-32	3.4	91
365	The use of synchrotron radiation techniques in the characterization of strained semiconductor heterostructures and thin films. *Surface Science Reports*, **2004**, 53, 1-197	12.9	91
364	An in situ temperature dependent IR, EPR and high resolution XANES study on the NO/Cu+□ZSM-5 interaction. *Chemical Physics Letters*, **2002**, 363, 389-396	2.5	91

363	Resonance Raman effects in TS-1: the structure of Ti(IV) species and reactivity towards H2O, NH3 and H2O2: an in situ study. *Physical Chemistry Chemical Physics*, **2003**, 5, 4390	3.6	90
362	Electron□hole reduced effective mass in monoatomic □□□□□□ quantum wires embedded in the siliceous crystalline matrix of ETS-10. *Microporous and Mesoporous Materials*, **1999**, 30, 155-163	5.3	89
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360	Lattice dynamics to trigger low temperature oxygen mobility in solid oxide ion conductors. *Journal of the American Chemical Society*, **2008**, 130, 16080-5	16.4	87
359	Alumina-Supported Copper Chloride. *Journal of Catalysis*, **2000**, 189, 91-104	7.3	87
358	Stretching frequencies of cation-CO adducts in alkali-metal exchanged zeolites: An elementary electrostatic approach. *Journal of Chemical Physics*, **1995**, 103, 3158-3165	3.9	87
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356	X-ray photoelectron spectroscopy and x-ray absorption near edge structure study of copper sites hosted at the internal surface of ZSM-5 zeolite: A comparison with quantitative and energetic data on the CO and NH3 adsorption. *Journal of Chemical Physics*, **2000**, 113, 9248-9261	3.9	86
355	Selective Catalytic Olefin Epoxidation with MnII-Exchanged MOF-5. *ACS Catalysis*, **2018**, 8, 596-601	13.1	86
354	Heterogeneous Nonclassical Carbonyls Stabilized in Cu(I)□and Ag(I)□ZSM-5 Zeolites: Thermodynamic and Spectroscopic Features. *Journal of Physical Chemistry B*, **2004**, 108, 9970-9983	3.4	84
353	Reversible Capture and Release of Cl and Br with a Redox-Active Metal-Organic Framework. *Journal of the American Chemical Society*, **2017**, 139, 5992-5997	16.4	82
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351	Oxide/metal interface distance and epitaxial strain in the NiO/Ag(001) system. *Physical Review Letters*, **2003**, 91, 046101	7.4	82
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349	Determination of the electronic and structural configuration of coordination compounds by synchrotron-radiation techniques. *Coordination Chemistry Reviews*, **2014**, 277-278, 130-186	23.2	81
348	Vibrational and Thermodynamic Properties of H2 Adsorbed on MgO in the 300□0 K Interval. *Journal of Physical Chemistry B*, **2004**, 108, 16174-16186	3.4	81
347	Response of CPO-27-Ni towards CO, N2 and C2H4. *Physical Chemistry Chemical Physics*, **2009**, 11, 9811-22	3.6	79
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344	In situ FTIR spectroscopy of key intermediates in the first stages of ethylene polymerization on the Cr/SiO2 Phillips catalyst: Solving the puzzle of the initiation mechanism?. *Journal of Catalysis*, **2006**, 240, 172-181	7.3	76
343	Characterization of a New Porous Pt-Containing Metal-Organic Framework Containing Potentially Catalytically Active Sites: Local Electronic Structure at the Metal Centers. *Chemistry of Materials*, **2007**, 19, 211-220	9.6	76
342	Interaction of N2, CO and NO with Cu-exchanged ETS-10: a compared FTIR study with other Cu-zeolites and with dispersed Cu2O. *Catalysis Today*, **2001**, 70, 91-105	5.3	76
341	CuI-Y and CuII-Y zeolites: a XANES, EXAFS and visible-NIR study. *Chemical Physics Letters*, **1997**, 269, 500-508	2.9	75
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339	X-ray absorption study at the Mg and O K edges of ultrathin MgO epilayers on Ag(001). *Physical Review B*, **2004**, 69,	3.3	74
338	Template burning inside TS-1 and Fe-MFI molecular sieves: an in situ XRPD study. *Journal of the American Chemical Society*, **2003**, 125, 14549-58	16.4	74
337	Temperature- and Pressure-Dependent Hydrogen Concentration in Supported PdHx Nanoparticles by Pd K-Edge X-ray Absorption Spectroscopy. *Journal of Physical Chemistry C*, **2014**, 118, 10416-10423	3.8	73
336	Alumina-Supported Copper Chloride. *Journal of Catalysis*, **2001**, 202, 279-295	7.3	73
335	Model oxide supported MoS2 HDS catalysts: structure and surface properties. *Catalysis Science and Technology*, **2011**, 1, 123	5.5	72
334	Structural, Electronic, and Vibrational Properties of the Ti□□Ti Quantum Wires in the Titanosilicate ETS-10. *Journal of Physical Chemistry B*, **2004**, 108, 1328-1336	3.4	72
333	Fundamental Aspects of H2S Adsorption on CPO-27-Ni. *Journal of Physical Chemistry C*, **2013**, 117, 15615-15622	3.8	71
332	Unravelling the Redox-catalytic Behavior of Ce Metal-Organic Frameworks by X-ray Absorption Spectroscopy. *ChemPhysChem*, **2018**, 19, 373-378	3.2	69
331	Heterogeneity of Framework Ti(IV) in Ti□Silicalite as Revealed by the Adsorption of NH3. Combined Calorimetric and Spectroscopic Study□ *Langmuir*, **1999**, 15, 5753-5764	4	69
330	H2S interaction with HKUST-1 and ZIF-8 MOFs: A multitechnique study. *Microporous and Mesoporous Materials*, **2015**, 207, 90-94	5.3	68
329	Determining the aluminium occupancy on the active T-sites in zeolites using X-ray standing waves. *Nature Materials*, **2008**, 7, 551-5	27	68
328	Time Resolved in Situ XAFS Study of the Electrochemical Oxygen Intercalation in SrFeO2.5 Brownmillerite Structure: Comparison with the Homologous SrCoO2.5 System□ *Journal of Physical Chemistry C*, **2011**, 115, 1311-1322	3.8	67

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314	Orthorhombic to monoclinic phase transition in high-Ti-loaded TS-1: an attempt to locate Ti in the MFI framework by low temperature XRD. *Microporous and Mesoporous Materials*, **2000**, 40, 85-94	5.3	59
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310	Formation of Nonplanar CuI(CO)3Tricarbonyls on CuI–ZSM-5:An FTIR Study at 80 K. *Journal of Catalysis*, **1998**, 173, 540-542	7.3	57

309	Infrared study of carbon monoxide adsorption at 77 K on faujasites and ZSM-5 zeolites. *Vibrational Spectroscopy*, **1993**, 5, 69-74	2.1	57
308	Effect of Pre-Reduction on the Properties and the Catalytic Activity of Pd/Carbon Catalysts: A Comparison with Pd/Al2O3. *ACS Catalysis*, **2014**, 4, 187-194	13.1	56
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