

Yasuyuki Tsuboi

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2901656/publications.pdf>

Version: 2024-02-01

117
papers

2,885
citations

172457

29
h-index

189892

50
g-index

118
all docs

118
docs citations

118
times ranked

2723
citing authors

#	ARTICLE	IF	CITATIONS
1	Preparation of silver nanoparticles by laser ablation in polyvinylpyrrolidone solutions. <i>Applied Surface Science</i> , 2008, 254, 5224-5230.	6.1	226
2	Plasmonic Optical Tweezers toward Molecular Manipulation: Tailoring Plasmonic Nanostructure, Light Source, and Resonant Trapping. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 2957-2967.	4.6	168
3	Tunable photoluminescence from the visible to near-infrared wavelength region of non-stoichiometric AgInS ₂ nanoparticles. <i>Journal of Materials Chemistry</i> , 2012, 22, 12851.	6.7	135
4	Near-Infrared Continuous-Wave Light Driving a Two-Photon Photochromic Reaction with the Assistance of Localized Surface Plasmon. <i>Journal of the American Chemical Society</i> , 2009, 131, 12623-12627.	13.7	128
5	Optical Trapping of Quantum Dots Based on Gap-Mode-Excitation of Localized Surface Plasmon. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 2327-2333.	4.6	122
6	Nanosecond Time-Resolved Observations of Laser Ablation of Silver in Water. <i>Japanese Journal of Applied Physics</i> , 2007, 46, 1533-1535.	1.5	104
7	Microsecond-resolved imaging of laser ablation at solid-liquid interface: investigation of formation process of nano-size metal colloids. <i>Applied Surface Science</i> , 2004, 229, 365-371.	6.1	102
8	Permanent Fixing or Reversible Trapping and Release of DNA Micropatterns on a Gold Nanostructure Using Continuous-Wave or Femtosecond-Pulsed Near-Infrared Laser Light. <i>Journal of the American Chemical Society</i> , 2013, 135, 6643-6648.	13.7	93
9	Optical Trapping of Amino Acids in Aqueous Solutions. <i>Journal of Physical Chemistry C</i> , 2010, 114, 5589-5593.	3.1	75
10	Reversible Photoinduced Formation and Manipulation of a Two-Dimensional Closely Packed Assembly of Polystyrene Nanospheres on a Metallic Nanostructure. <i>Journal of Physical Chemistry C</i> , 2013, 117, 2500-2506.	3.1	71
11	Poly(N-Isopropylacrylamide) Microparticles Produced by Radiation Pressure of a Focused Laser Beam: A Structural Analysis by Confocal Raman Microspectroscopy Combined with a Laser-Trapping Technique. <i>Journal of Physical Chemistry B</i> , 2005, 109, 7033-7039.	2.6	65
12	The 248 nm Excimer Laser Ablation of Liquid Benzene Derivatives: A Relation between Ablation Threshold and Molecular Photochemical Reactivity. <i>The Journal of Physical Chemistry</i> , 1994, 98, 11237-11241.	2.9	64
13	Metallic-Nanostructure-Enhanced Optical Trapping of Flexible Polymer Chains in Aqueous Solution As Revealed by Confocal Fluorescence Microspectroscopy. <i>Journal of Physical Chemistry C</i> , 2012, 116, 14610-14618.	3.1	54
14	Plasmon-Enhanced Photoluminescence and Photocatalytic Activities of Visible-Light-Responsive ZnS-AgInS ₂ Solid Solution Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2013, 117, 2511-2520.	3.1	51
15	Crystallization of Lysozyme Based on Molecular Assembling by Photon Pressure. <i>Japanese Journal of Applied Physics</i> , 2007, 46, L1234.	1.5	47
16	Photoinduced Electron Transfer Processes of C60-Doped Poly(N-vinylcarbazole) Films As Revealed by Picosecond Laser Photolysis. <i>Journal of Physical Chemistry B</i> , 1997, 101, 5118-5123.	2.6	46
17	Optical manipulation of proteins in aqueous solution. <i>Applied Surface Science</i> , 2009, 255, 9906-9908.	6.1	44
18	Nanosecond imaging study on laser ablation of liquid benzene. <i>Applied Physics Letters</i> , 1994, 64, 2745-2747.	3.3	41

#	ARTICLE	IF	CITATIONS
19	Intramolecular charge transfer in rigidly linked naphthalene-trialkylamine compounds. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995, 91, 4047-4057.	1.7	39
20	Phase Separation Dynamics of Aqueous Solutions of Thermoresponsive Polymers Studied by a Laser T-Jump Technique. <i>Journal of Physical Chemistry B</i> , 2008, 112, 2562-2565.	2.6	39
21	Resonant Excitation Effect on Optical Trapping of Myoglobin: The Important Role of a Heme Cofactor. <i>Journal of Physical Chemistry C</i> , 2013, 117, 10691-10697.	3.1	38
22	AFM observation of silk fibroin on mica substrates: morphologies reflecting the secondary structures. <i>Thin Solid Films</i> , 2003, 440, 208-216.	1.8	37
23	Switching from photochemical to photothermal mechanism in laser ablation of benzene solutions. <i>Journal of Applied Physics</i> , 1997, 82, 5799-5806.	2.5	36
24	UV Laser Induced Jet Formation from Liquid Surface As Revealed by Nanosecond Time-Resolved Imaging and Spectroscopic Studies. <i>The Journal of Physical Chemistry</i> , 1995, 99, 10305-10312.	2.9	35
25	The 248-nm Excimer-Laser-Ablation Mechanism of Liquid Benzene Derivatives: Photochemical Formation of Benzyl Radical Leads to Ablation. <i>Journal of Physical Chemistry A</i> , 1998, 102, 1661-1665.	2.5	34
26	Pulsed laser deposition of silk protein: Effect of photosensitized-ablation on the secondary structure in thin deposited films. <i>Journal of Applied Physics</i> , 2001, 89, 7917-7923.	2.5	32
27	Pulsed laser deposition of collagen and keratin. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2001, 145, 209-214.	3.9	32
28	Laser-Induced Shock Wave Can Spark Triboluminescence of Amorphous Sugars. <i>Journal of Physical Chemistry A</i> , 2008, 112, 6517-6521.	2.5	32
29	Nanosecond and Femtosecond Laser Photochemistry and Ablation Dynamics of Neat Liquid Benzenes. <i>Journal of Physical Chemistry B</i> , 2002, 106, 3049-3060.	2.6	31
30	Highly Sensitive Detection of Organic Molecules on the Basis of a Poly(<i>N</i> -isopropylacrylamide) Microassembly Formed by Plasmonic Optical Trapping. <i>Analytical Chemistry</i> , 2017, 89, 532-537.	6.5	29
31	Optical tweezing and binding at high irradiation powers on black-Si. <i>Scientific Reports</i> , 2017, 7, 12298.	3.3	29
32	Plasmonic Manipulation of DNA using a Combination of Optical and Thermophoretic Forces: Separation of Different-Sized DNA from Mixture Solution. <i>Scientific Reports</i> , 2020, 10, 3349.	3.3	29
33	Hydrogel Adhesion with Wrinkle Formation by Spatial Control of Polymer Networks. <i>Journal of Physical Chemistry B</i> , 2016, 120, 5042-5046.	2.6	27
34	Biodegradable PLGA nanoparticles loaded with hydrophobic drugs: confocal Raman microspectroscopic characterization. <i>Journal of Materials Chemistry B</i> , 2015, 3, 3677-3680.	5.8	26
35	Laser-Driven Shock Wave-Induced Triboluminescence of an Organic Crystal: Toward a Semiquantitative Study. <i>Journal of Physical Chemistry B</i> , 2003, 107, 7547-7550.	2.6	24
36	Optical Trapping of Polystyrene Nanoparticles on Black Silicon: Implications for Trapping and Studying Bacteria and Viruses. <i>ACS Applied Nano Materials</i> , 2020, 3, 9831-9841.	5.0	24

#	ARTICLE	IF	CITATIONS
37	Photothermal Ablation of Polystyrene Film by 248 NM Excimer Laser Irradiation: a Mechanistic Study by Time-Resolved Measurements. <i>Laser Chemistry</i> , 1996, 16, 167-177.	0.5	22
38	Nanohole Processing of Polymer Films Based on the Laser-Induced Superheating of Au Nanoparticles. <i>Applied Physics Express</i> , 0, 1, 087001.	2.4	22
39	Deposition of a thin polystyrene film by anthracene-photosensitized laser ablation at 351 nm. <i>Applied Physics Letters</i> , 1999, 74, 3896-3898.	3.3	21
40	Template-Guided Synthesis and Individual Characterization of Poly(N-isopropylacrylamide)-Based Microgels. <i>Langmuir</i> , 2005, 21, 7076-7079.	3.5	21
41	A sensor for adenosine triphosphate fabricated by laser-induced forward transfer of luciferase onto a poly(dimethylsiloxane) microchip. <i>Applied Surface Science</i> , 2007, 253, 8422-8427.	6.1	21
42	Thin Film Formation of a Protein by Laser Ablation Deposition Technique. <i>Chemistry Letters</i> , 1998, 27, 521-522.	1.3	20
43	Thin films formation of poly(N-vinylcarbazole) by laser ablation deposition. <i>Journal of Applied Physics</i> , 1999, 85, 4189-4195.	2.5	20
44	Nanodot array deposition via single shot laser interference pattern using laser-induced forward transfer. <i>International Journal of Extreme Manufacturing</i> , 2020, 2, 025101.	12.7	20
45	Temperature near Gold Nanoparticles under Photoexcitation: Evaluation Using a Fluorescence Correlation Technique. <i>Journal of Physical Chemistry C</i> , 2013, 117, 8388-8396.	3.1	19
46	Laser Ablation of Silk Protein (Fibroin) Films. <i>Japanese Journal of Applied Physics</i> , 2002, 41, 4772-4779.	1.5	18
47	Acceleration of a photochromic ring-opening reaction of diarylethene derivatives by excitation of localized surface plasmon. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2011, 221, 250-255.	3.9	18
48	Phase Separation Dynamics of Aqueous Poly(N-isopropylacrylamide) Solutions: Characteristic Behavior of the Molecular Weight and Concentration Dependences. <i>Macromolecular Chemistry and Physics</i> , 2012, 213, 1879-1884.	2.2	18
49	Accelerating the Phase Separation in Aqueous Poly(N-isopropylacrylamide) Solutions by Slight Modification of the Polymer Stereoregularity: A Single Molecule Fluorescence Study. <i>Journal of Physical Chemistry C</i> , 2013, 117, 10818-10824.	3.1	17
50	Picosecond Dynamics of Excited 9,9-Bianthryl Adsorbed on Porous Glass: A Role of Symmetry Breaking in the Ground State. <i>Journal of Physical Chemistry A</i> , 2002, 106, 2067-2073.	2.5	16
51	Pulsed Laser Deposition of Poly(tetrafluoroethylene), Poly(methylmethacrylate), and Polycarbonate Utilizing Anthracene-Photosensitized Ablation. <i>Japanese Journal of Applied Physics</i> , 2002, 41, 885-890.	1.5	16
52	Phase Separation of Aqueous Poly(vinyl methyl ether) Solutions Induced by the Photon Pressure of a Focused Near-Infrared Laser Beam. <i>Bulletin of the Chemical Society of Japan</i> , 2007, 80, 1926-1931.	3.2	16
53	Plasmon-Based Optical Trapping of Polymer Nano-Spheres as Explored by Confocal Fluorescence Microspectroscopy: A Possible Mechanism of a Resonant Excitation Effect. <i>Japanese Journal of Applied Physics</i> , 2012, 51, 092001.	1.5	16
54	Plasmonic optical trapping of soft nanomaterials such as polymer chains and DNA: micro-patterning formation. <i>Optical Review</i> , 2015, 22, 137-142.	2.0	16

#	ARTICLE	IF	CITATIONS
55	Effects of Syndiotacticity on the Dynamic and Static Phase Separation Properties of Poly(<i>N</i> -isopropylacrylamide) in Aqueous Solution. <i>Journal of Physical Chemistry B</i> , 2016, 120, 7724-7730.	2.6	16
56	Phase transition dynamics of fluorescent-labeled poly(<i>N</i> -isopropylacrylamide) in aqueous solution as revealed by time-resolved spectroscopy combined with a laser T-jump technique. <i>Chemical Physics Letters</i> , 2009, 468, 42-45.	2.6	15
57	A method for an approximate determination of a polymer-rich-domain concentration in phase-separated poly(<i>N</i> -isopropylacrylamide) aqueous solution by means of confocal Raman microspectroscopy combined with optical tweezers. <i>Analytica Chimica Acta</i> , 2015, 854, 118-121.	5.4	15
58	Plasmonic optical trapping of nanometer-sized J- /H- dye aggregates as explored by fluorescence microspectroscopy. <i>Optics Express</i> , 2017, 25, 13617.	3.4	15
59	Plasmon-Based Optical Trapping of Polymer Nano-Spheres as Explored by Confocal Fluorescence Microspectroscopy: A Possible Mechanism of a Resonant Excitation Effect. <i>Japanese Journal of Applied Physics</i> , 2012, 51, 092001.	1.5	15
60	Laser-Induced Reversible Volume Phase Transition of a Poly(<i>N</i> -isopropylacrylamide) Gel Explored by Raman Microspectroscopy. <i>Polymer Journal</i> , 2008, 40, 367-374.	2.7	14
61	Rapid Phase Separation in Aqueous Solution of Temperature-sensitive Poly(<i>N</i> , <i>N</i> -diethylacrylamide). <i>Macromolecular Chemistry and Physics</i> , 2016, 217, 2576-2583.	2.2	14
62	Regular Assembly of Polymer Nanoparticles by Optical Trapping Enhanced with a Random Array of Si Needles for Reconfigurable Photonic Crystals in Liquid. <i>ACS Applied Nano Materials</i> , 2019, 2, 7637-7643.	5.0	14
63	Laser-Induced Transfer of Noble Metal Nanodots with Femtosecond Laser-Interference Processing. <i>Nanomaterials</i> , 2021, 11, 305.	4.1	14
64	Vacuum-deposited films of liquid crystal molecule of 4-dodecyloxy-4'-cyanobiphenyl: Their electronic spectra and molecular aggregate structures. <i>Thin Solid Films</i> , 1997, 311, 277-285.	1.8	13
65	Beam shaping by spatial light modulator and 4f system to square and top-flat for interference laser processing. <i>Proceedings of SPIE</i> , 2017, , .	0.8	13
66	Preparation and Shape-Modification of Silver Colloids by Laser Ablation in Liquids: A Brief Review. <i>Science of Advanced Materials</i> , 2012, 4, 391-400.	0.7	12
67	Phase Separation Dynamics of Aqueous Poly [(2-ethoxy ethoxy ethyl vinyl ether) Solutions as Explored using the Laser T-jump Technique Combined With Photometry. <i>Macromolecular Chemistry and Physics</i> , 2012, 213, 374-381.	2.2	11
68	A long arm and a tight grip. <i>Nature Nanotechnology</i> , 2016, 11, 5-6.	31.5	11
69	Dynamics of the Phase Separation in a Thermoresponsive Polymer: Accelerated Phase Separation of Stereocontrolled Poly(<i>N,N</i> -diethylacrylamide) in Water. <i>Langmuir</i> , 2018, 34, 13690-13696.	3.5	11
70	Thermo-Plasmonic Trapping of Living Cyanobacteria on a Gold Nanopyramidal Dimer Array: Implications for Plasmonic Biochips. <i>ACS Applied Nano Materials</i> , 2020, 3, 10067-10072.	5.0	10
71	Microanalysis of Single Poly(<i>N</i> -isopropylacrylamide) Droplet Produced by an Optical Tweezer in Water: Isotacticity Dependence of Growth and Chemical Structure of the Droplet. <i>Journal of Physical Chemistry B</i> , 2020, 124, 8454-8463.	2.6	10
72	Fluorescent Crystalloluminescence of <i>N</i> -Isopropylcarbazole. <i>Journal of Physical Chemistry B</i> , 2004, 108, 2822-2826.	2.6	9

#	ARTICLE	IF	CITATIONS
73	Incoherent Optical Tweezers on Black Titanium. ACS Applied Materials & Interfaces, 2021, 13, 27586-27593.	8.0	9
74	Electrophoretic Adhesion of Conductive Hydrogels. Macromolecular Rapid Communications, 2020, 41, 2000169.	3.9	8
75	Interferometric spectral imaging of liquid in laser ablation. Review of Scientific Instruments, 1996, 67, 3222-3228.	1.3	7
76	Preparation of a Novel Thin Film Utilizing a Magnetic Field: Alignment of Organic Microcrystals as Revealed by Atomic Force Microscopy. Japanese Journal of Applied Physics, 1997, 36, L1048-L1050.	1.5	7
77	Absorption Spectra of C60-Excited States in Various Solvents: Their Dependence on the Ionization Potential of Solvent Molecules. Bulletin of the Chemical Society of Japan, 2000, 73, 589-598.	3.2	7
78	Formation of Single Double-Layered Coacervate of Poly(<i>N,N</i> -diethylacrylamide) in Water by a Laser Tweezer. Langmuir, 2021, 37, 2874-2883.	3.5	7
79	Vacuum-deposited films of liquid crystal molecules of 4-n-alkoxy-4'-cyanobiphenyls: Their electronic spectra and molecular aggregate structures. Thin Solid Films, 1999, 338, 243-251.	1.8	6
80	Nanofabrication of high throughput 30 nm hole 2D arrays by a simple visible laser ablation technique. Applied Surface Science, 2017, 420, 868-872.	6.1	6
81	Laser trapping/confocal Raman spectroscopic characterization of PLGA-PEG nanoparticles. Soft Matter, 2018, 14, 8090-8094.	2.7	6
82	Vacuum-deposited films of mesogen of 4-n-pentyl-4'-cyano-p-terphenyl: their electronic spectra and molecular aggregate structures. Thin Solid Films, 2000, 370, 285-293.	1.8	5
83	Local Melting of Gold Thin Films by Femtosecond Laser-Interference Processing to Generate Nanoparticles on a Source Target. Nanomaterials, 2018, 8, 477.	4.1	5
84	Nonlinear Photophysics and Ablation of Liquid Naphthalene Derivatives: Fluence-Dependence of Luminescence Spectra upon 248 nm Laser Excitation. Journal of Physical Chemistry A, 2003, 107, 3017-3023.	2.5	4
85	Enhancement of 2-Photon Absorption of a Dye in a Polymer Microsphere Based on an Optical Cavity Effect. Analytical Sciences, 2010, 26, 1241-1245.	1.6	4
86	Rapid hydrogel repair utilizing microgel architectures. Materials Chemistry Frontiers, 2017, 1, 1594-1599.	5.9	4
87	Dynamics of Laser Induced Morphological Changes of Liquids Part I. Cavitation and Explosive Vaporization of Liquids.. The Review of Laser Engineering, 1995, 23, 2-8.	0.0	4
88	Optical Trapping of Nanocrystals at Oil/Water Interfaces: Implications for Photocatalysis. ACS Applied Nano Materials, 2021, 4, 11743-11752.	5.0	4
89	Nanotraffic Lights: Rayleigh Scattering Microspectroscopy of Optically Trapped Octahedral Gold Nanoparticles. Journal of Physical Chemistry C, 2019, 123, 23096-23102.	3.1	3
90	Dynamics of Laser Induced Morphological Changes of Liquids Part II. Liquid Ablation by Electronic Excitation.. The Review of Laser Engineering, 1995, 23, 9-15.	0.0	2

#	ARTICLE	IF	CITATIONS
91	Fluorescence Colour Control in Perylene-3,4,9,10-tetracarboxylic diimide Labeled Polymer Chains Trapped by Nanotextured Silicon. <i>Angewandte Chemie - International Edition</i> , 2022, , .	13.8	2
92	Molecular Probe for a Fluorous Medium: Long-Lived Phosphorescence of .ALPHA.-Diketones in Perfluoromethylcyclohexane at Room Temperature. <i>Analytical Sciences</i> , 2005, 21, 303-308.	1.6	1
93	Nanoscale Laser Processing of Hollow Silica Microbeads Assisted by Surface Plasmon Resonance of Gold Particles. <i>Chemistry Letters</i> , 2011, 40, 1411-1413.	1.3	1
94	Thermo-plasmonic manipulation of living cyanobacteria on a gold nanostructure. , 2017, , .		1
95	Nanostructure-assisted optical tweezers for microspectroscopic polymer analysis. <i>Polymer Journal</i> , 2021, 53, 271-281.	2.7	1
96	Raman microspectroscopic study on an optically formed poly(N-isopropylacrylamide) rich microparticle: molecular weight dependence of a polymer concentration in the particle. , 2018, , .		1
97	Optical trapping of gold and semiconductor nanoparticles at oil-water interfaces with a focused near-infrared laser beam. , 2018, , .		1
98	Thin Films Formation of Organic Polymers by Photosensitized Pulsed Laser Deposition.. The Review of Laser Engineering, 2003, 31, 135-140.	0.0	1
99	Effect of applied voltage on aggregate structure of microcrystals in vacuum-deposited films of mesogens. <i>Journal of Crystal Growth</i> , 1998, 193, 732-737.	1.5	0
100	Magnetic Field Effect on Laser Ablation of Organic Polymer Films as Revealed by Atomic Force Microscopy. <i>Molecular Crystals and Liquid Crystals</i> , 1998, 314, 291-296.	0.3	0
101	Surface-plasmon-based optical trapping of hard nanoparticles: two-dimensional closely packed assembly of polystyrene nanospheres on a metallic nanostructure. <i>Proceedings of SPIE</i> , 2013, , .	0.8	0
102	Mechanistic study on plasmon-based optical trapping of hard and soft nanoparticles. , 2013, , .		0
103	Macromol. Chem. Phys. 23/2016. <i>Macromolecular Chemistry and Physics</i> , 2016, 217, 2664-2664.	2.2	0
104	Raman Microspectroscopic Studies on Thermo-Responsive Polymer Rich Domains Formed by Optical Tweezers. <i>Kobunshi Ronbunshu</i> , 2018, 75, 243-253.	0.2	0
105	Plasmonic optical trapping of pyrene-pendant polymer chains by controlling thermophoretic force. <i>Journal of Physics: Conference Series</i> , 2019, 1220, 012041.	0.4	0
106	Formation of a single poly(N,N-diethylacrylamide) micro-droplet in water by coupling of photothermal effects and an optical force. <i>Journal of Physics: Conference Series</i> , 2019, 1220, 012034.	0.4	0
107	Optical Trapping and of Micro-Spectroscopy of Proteins. <i>Seibutsu Butsuri</i> , 2009, 49, 252-255.	0.1	0
108	Optical Trapping of Nanoparticles and Polymers Based on Localized Surface Plasmons. The Review of Laser Engineering, 2013, 41, 361.	0.0	0

#	ARTICLE	IF	CITATIONS
109	Thermally Induced Nanocrystal Array of Poly(N-Vinylcarbazole) on Si-Wafer Substrate. Materials Sciences and Applications, 2014, 05, 271-277.	0.4	0
110	Optical Trapping of Soft-Matter Nanoparticles Based on Localized Surface Plasmon Under. The Review of Laser Engineering, 2014, 42, 766.	0.0	0
111	Laser Micro/Nano Processing of Materials Based on Light Absorption of Metallic Nanoparticles. The Review of Laser Engineering, 2015, 43, 740.	0.0	0
112	Thermophoresis-assisted optical trapping of pyrene-labeled hydrophilic polymer chains. , 2018, , .		0
113	Novel non-plasmonic optical trapping: nano-structured semiconductor assisted (NASSCA) optical tweezers. , 2018, , .		0
114	Fluorescence Colour Control in Perylene- ϵ -Labeled Polymer Chains Trapped by Nanotextured Silicon. Angewandte Chemie, 0, , .	2.0	0
115	Frontispiz: Fluorescence Colour Control in Perylene- ϵ -Labeled Polymer Chains Trapped by Nanotextured Silicon. Angewandte Chemie, 2022, 134, .	2.0	0
116	Frontispiece: Fluorescence Colour Control in Perylene- ϵ -Labeled Polymer Chains Trapped by Nanotextured Silicon. Angewandte Chemie - International Edition, 2022, 61, .	13.8	0
117	Generation of Ultralong Liposome Tubes by Membrane Fusion beneath a Laser-Induced Microbubble on Gold Surfaces. ACS Omega, 2022, 7, 13120-13127.	3.5	0