Toshiaki Fukui

List of Publications by Year
in descending order

108 papers	6,120 citations	53794 45 h-index	76900 74 g-index
110 all docs	110 docs citations	110 times ranked	4097 citing authors

#	Article	IF	Citations
1	Biosynthesis of Polyhydroxyalkanoate Terpolymer from Methanol via the Reverse Î²-Oxidation Pathway in the Presence of Lanthanide. Microorganisms, 2022, 10, 184.	3.6	10
2	Reversible RNA phosphorylation stabilizes tRNA for cellular thermotolerance. Nature, 2022, 605, 372-379.	27.8	35
3	Biosynthesis of Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) From Glucose by Escherichia coli Through Butyryl-CoA Formation Driven by Ccr-Emd Combination. Frontiers in Bioengineering and Biotechnology, 2022, 10, .	4.1	3
4	Characterization of a GlgC homolog from extremely halophilic archaeon Haloarcula japonica. Bioscience, Biotechnology and Biochemistry, 2021, 85, 1441-1447.	1.3	1
5	Isopropanol production with reutilization of glucose-derived CO2 by engineered Ralstonia eutropha. Journal of Bioscience and Bioengineering, 2021, 132, 479-486.	2.2	9
6	Methylotrophic bacterium-based molecular sensor for the detection of low concentrations of methanol. Journal of Bioscience and Bioengineering, 2021, 132, 247-252.	2.2	2
7	Biosynthesis of Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) from CO2 by a Recombinant Cupriavidusnecator. Bioengineering, 2021, 8, 179.	3.5	22
8	A study on the effects of increment and decrement repeated fed-batch feeding of glucose on the production of poly(3-hydroxybutyrate) [P(3HB)] by a newly engineered Cupriavidus necator NSDG-GG mutant in batch fill-and-draw fermentation. Journal of Biotechnology, 2020, 307, 77-86.	3.8	12
9	Modification of acetoacetyl-CoA reduction step in Ralstonia eutropha for biosynthesis of poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) from structurally unrelated compounds. Microbial Cell Factories, 2019, 18, 147.	4.0	24
10	Random mutagenesis of a hyperthermophilic archaeon identified tRNA modifications associated with cellular hyperthermotolerance. Nucleic Acids Research, 2019, 47, 1964-1976.	14.5	38
11	Two NADH-dependent (S)-3-hydroxyacyl-CoA dehydrogenases from polyhydroxyalkanoate-producing Ralstonia eutropha. Journal of Bioscience and Bioengineering, 2019, 127, 294-300.	2.2	14
12	Microbial Diversity in Sediments from the Bottom of the Challenger Deep, the Mariana Trench. Microbes and Environments, 2018, 33, 186-194.	1.6	75
13	Enhancement of bioplastic polyhydroxybutyrate P(3HB) production from glucose by newly engineered strain Cupriavidus necator NSDG-GG using response surface methodology. 3 Biotech, 2018, 8, 330.	2.2	13
14	Conversion of rice husks to polyhydroxyalkanoates (<scp>PHA</scp>) via a threeâ€step process: optimized alkaline pretreatment, enzymatic hydrolysis, and biosynthesis by <i>Burkholderia cepacia</i><scp>USM</scp> (<scp>JCM</scp> 15050). Journal of Chemical Technology and Biotechnology, 2017, 92, 100-108.	3.2	69
15	Fractionation and thermal characteristics of biosynthesized polyhydoxyalkanoates bearing aromatic groups as side chains. Polymer Journal, 2017, 49, 557-565.	2.7	21
16	Compositional regulation of poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) by replacement of granule-associated protein in Ralstonia eutropha. Microbial Cell Factories, 2015, 14, 187.	4.0	20
17	Complete Biosynthetic Pathway of the C₅₀Carotenoid Bacterioruberin from Lycopene in the Extremely Halophilic Archaeon Haloarcula japonica. Journal of Bacteriology, 2015, 197, 1614-1623.	2.2	81
18	New Insight into the Role of the Calvin Cycle: Reutilization of CO2 Emitted through Sugar Degradation. Scientific Reports, 2015, 5, 11617.	3.3	45

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19	Improved artificial pathway for biosynthesis of poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) with high C6-monomer composition from fructose in Ralstonia eutropha. Metabolic Engineering, 2015, 27, 38-45.	7.0	29
20	Identification of carotenoids from the extremely halophilic archaeon Haloarcula japonica. Frontiers in Microbiology, 2014, 5, 100.	3.5	92
21	Genetic Examination and Mass Balance Analysis of Pyruvate/Amino Acid Oxidation Pathways in the Hyperthermophilic Archaeon Thermococcus kodakarensis. Journal of Bacteriology, 2014, 196, 3831-3839.	2.2	12
22	Metabolite profiles of polyhydroxyalkanoate-producing Ralstonia eutropha H16. Metabolomics, 2014, 10, 190-202.	3.0	27
23	Biosynthesis of polyhydroxyalkanoate copolymers from methanol by Methylobacterium extorquens AM1 and the engineered strains under cobalt-deficient conditions. Applied Microbiology and Biotechnology, 2014, 98, 3715-3725.	3.6	66
24	Characterization and gene deletion analysis of four homologues of group 3 pyridine nucleotide disulfide oxidoreductases from Thermococcus kodakarensis. Extremophiles, 2014, 18, 603-616.	2.3	5
25	Characterization of Two Members among the Five ADP-Forming Acyl Coenzyme A (Acyl-CoA) Synthetases Reveals the Presence of a 2-(Imidazol-4-yl)Acetyl-CoA Synthetase in Thermococcus kodakarensis. Journal of Bacteriology, 2014, 196, 140-147.	2.2	15
26	Enhancement of glycerol utilization ability of Ralstonia eutropha H16 for production of polyhydroxyalkanoates. Applied Microbiology and Biotechnology, 2014, 98, 7559-7568.	3.6	36
27	Modification of Î²-oxidation pathway in Ralstonia eutropha for production of poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) from soybean oil. Journal of Bioscience and Bioengineering, 2014, 117, 184-190.	2.2	52
28	Detection of phase-dependent transcriptomic changes and Rubisco-mediated CO2 fixation into poly (3-hydroxybutyrate) under heterotrophic condition in Ralstonia eutropha H16 based on RNA-seq and gene deletion analyses. BMC Microbiology, 2013, 13, 169.	3.3	63
29	Gene Analysis, Expression, and Characterization of an Intracellular Î±-Amylase from the Extremely Halophilic Archaeon <i>Haloarcula japonica</i>. Bioscience, Biotechnology and Biochemistry, 2013, 77, 281-288.	1.3	26
30	Thermostable Alcohol Dehydrogenase from Thermococcus kodakarensis KOD1 for Enantioselective Bioconversion of Aromatic Secondary Alcohols. Applied and Environmental Microbiology, 2013, 79, 2209-2217.	3.1	24
31	Mutational Analysis of a CBM Family 5 Chitin-Binding Domain of an Alkaline Chitinase from<i>Bacillus</i>sp. J813. Bioscience, Biotechnology and Biochemistry, 2012, 76, 530-535.	1.3	16
32	Overview of the genetic tools in the Archaea. Frontiers in Microbiology, 2012, 3, 337.	3.5	39
33	Characterization and Functional Analyses of <i>R</i> -Specific Enoyl Coenzyme A Hydratases in Polyhydroxyalkanoate-Producing Ralstonia eutropha. Applied and Environmental Microbiology, 2012, 78, 493-502.	3.1	50
34	Identification of mutation points in Cupriavidus necator NCIMB 11599 and genetic reconstitution of glucose-utilization ability in wild strain H16 for polyhydroxyalkanoate production. Journal of Bioscience and Bioengineering, 2012, 113, 63-69.	2.2	36
35	Application of a novel thermostable NAD(P)H oxidase from hyperthermophilic archaeon for the regeneration of both NAD⁺ and NADP⁺. Biotechnology and Bioengineering, 2012, 109, 53-62.	3.3	34
36	A Calcium-Dependent Xylan-Binding Domain of Alkaline Xylanase from Alkaliphilic<i>Bacillus</i>sp. Strain 41M-1. Bioscience, Biotechnology and Biochemistry, 2011, 75, 379-381.	1.3	11

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37	Evaluation of promoters for gene expression in polyhydroxyalkanoate-producing Cupriavidus necator H16. Applied Microbiology and Biotechnology, 2011, 89, 1527-1536.	3.6	52
38	Engineering of pha operon on Cupriavidus necator chromosome for efficient biosynthesis of poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) from vegetable oil. Polymer Degradation and Stability, 2010, 95, 1305-1312.	5.8	66
39	Characterization of NADH Oxidase/NADPH Polysulfide Oxidoreductase and Its Unexpected Participation in Oxygen Sensitivity in an Anaerobic Hyperthermophilic Archaeon. Journal of Bacteriology, 2010, 192, 5192-5202.	2.2	22
40	Analysis of Functional Domains and Improvement of Alkaliphily of an Alkaline Xylanase on the Basis of Its Three-dimensional Structure. Journal of Applied Glycoscience (1999), 2010, 57, 145-150.	0.7	4
41	Microbial Synthesis of Poly((<i>R</i>)-3-hydroxybutyrate-<i>co</i>- 3-hydroxypropionate) from Unrelated Carbon Sources by Engineered Cupriavidus necator. Biomacromolecules, 2009, 10, 700-706.	5.4	60
42	Additional Carbohydrate-Binding Modules Enhance the Insoluble Substrate-Hydrolytic Activity of Î²-1,3-Glucanase from Alkaliphilic<i>Nocardiopsis</i>sp. F96. Bioscience, Biotechnology and Biochemistry, 2009, 73, 1078-1082.	1.3	6
43	Improvement of Alkaliphily of<i>Bacillus</i>Alkaline Xylanase by Introducing Amino Acid Substitutions Both on Catalytic Cleft and Protein Surface. Bioscience, Biotechnology and Biochemistry, 2009, 73, 965-967.	1.3	36
44	Targeted engineering of <i>Cupriavidus necator</i> chromosome for biosynthesis of poly(3-hydroxybutyrate-<i>co</i>-3-hydroxyhexanoate) from vegetable oil. Canadian Journal of Chemistry, 2008, 86, 621-627.	1.1	58
45	Disruption of a Sugar Transporter Gene Cluster in a Hyperthermophilic Archaeon Using a Host-Marker System Based on Antibiotic Resistance. Journal of Bacteriology, 2007, 189, 2683-2691.	2.2	101
46	A Novel ADP-forming Succinyl-CoA Synthetase in Thermococcus kodakaraensis Structurally Related to the Archaeal Nucleoside Diphosphate-forming Acetyl-CoA Synthetases. Journal of Biological Chemistry, 2007, 282, 26963-26970.	3.4	34
47	Methionine Sulfoxide Reductase from the Hyperthermophilic Archaeon <i>Thermococcus kodakaraensis</i> , an Enzyme Designed To Function at Suboptimal Growth Temperatures. Journal of Bacteriology, 2007, 189, 7134-7144.	2.2	16
48	Phosphoenolpyruvate synthase plays an essential role for glycolysis in the modified Embden-Meyerhof pathway in Thermococcus kodakarensis. Molecular Microbiology, 2006, 61, 898-909.	2.5	75
49	Molecular identification of a novel Î²-1,3-glucanase from alkaliphilic Nocardiopsis sp. strain F96. Extremophiles, 2006, 10, 251-255.	2.3	32
50	Functional Improvement of Xylanase by Introducing Mutated Xylan-binding Domain. Journal of Applied Glycoscience (1999), 2006, 53, 131-136.	0.7	4
51	Characterization of an archaeal malic enzyme from the hyperthermophilic archaeon<i>Thermococcus kodakaraensis</i>KOD1. Archaea, 2005, 1, 293-301.	2.3	29
52	Characterization of a Novel Glucosamine-6-Phosphate Deaminase from a Hyperthermophilic Archaeon. Journal of Bacteriology, 2005, 187, 7038-7044.	2.2	25
53	Improved and Versatile Transformation System Allowing Multiple Genetic Manipulations of the Hyperthermophilic Archaeon Thermococcus kodakaraensis. Applied and Environmental Microbiology, 2005, 71, 3889-3899.	3.1	198
54	Complete genome sequence of the hyperthermophilic archaeon Thermococcus kodakaraensis KOD1 and comparison with Pyrococcus genomes. Genome Research, 2005, 15, 352-363.	5.5	376

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55	Continuous hydrogen production by the hyperthermophilic archaeon, Thermococcus kodakaraensis KOD1. Journal of Biotechnology, 2005, 116, 271-282.	3.8	148
56	Description of<i>Thermococcus kodakaraensis</i>sp. nov., a well studied hyperthermophilic archaeon previously reported as<i>Pyrococcus</i>sp. KOD1. Archaea, 2004, 1, 263-267.	2.3	261
57	Presence of a Novel Phosphopentomutase and a 2-Deoxyribose 5-Phosphate Aldolase Reveals a Metabolic Link between Pentoses and Central Carbon Metabolism in the Hyperthermophilic Archaeon Thermococcus kodakaraensis. Journal of Bacteriology, 2004, 186, 4185-4191.	2.2	50
58	Genetic Evidence Identifying the True Gluconeogenic Fructose-1,6-Bisphosphatase in Thermococcus kodakaraensis and Other Hyperthermophiles. Journal of Bacteriology, 2004, 186, 5799-5807.	2.2	88
59	First Characterization of an Archaeal GTP-Dependent Phosphoenolpyruvate Carboxykinase from the Hyperthermophilic Archaeon Thermococcus kodakaraensis KOD1. Journal of Bacteriology, 2004, 186, 4620-4627.	2.2	46
60	Concerted Action of Diacetylchitobiose Deacetylase and Exo-Î²-D-glucosaminidase in a Novel Chitinolytic Pathway in the Hyperthermophilic Archaeon Thermococcus kodakaraensis KOD1. Journal of Biological Chemistry, 2004, 279, 30021-30027.	3.4	78
61	Targeted Gene Disruption by Homologous Recombination in the Hyperthermophilic Archaeon Thermococcus kodakaraensis KOD1. Journal of Bacteriology, 2003, 185, 210-220.	2.2	254
62	Characterization of an Exo-Î²- d -Glucosaminidase Involved in a Novel Chitinolytic Pathway from the Hyperthermophilic Archaeon Thermococcus kodakaraensis KOD1. Journal of Bacteriology, 2003, 185, 5175-5181.	2.2	97
63	Crystal Structure of the (R)-Specific Enoyl-CoA Hydratase from Aeromonas caviae Involved in Polyhydroxyalkanoate Biosynthesis. Journal of Biological Chemistry, 2003, 278, 617-624.	3.4	73
64	Characterization of an Archaeal Cyclodextrin Glucanotransferase with a Novel C-Terminal Domain. Journal of Bacteriology, 2002, 184, 777-784.	2.2	57
65	A Membrane-Bound Archaeal Lon Protease Displays ATP-Independent Proteolytic Activity towards Unfolded Proteins and ATP-Dependent Activity for Folded Proteins. Journal of Bacteriology, 2002, 184, 3689-3698.	2.2	58
66	Engineering ofRalstonia eutrophafor Production of Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) from Fructose and Solid-State Properties of the Copolymer. Biomacromolecules, 2002, 3, 618-624.	5.4	77
67	A Novel Candidate for the True Fructose-1,6-bisphosphatase in Archaea. Journal of Biological Chemistry, 2002, 277, 30649-30655.	3.4	71
68	Gene cloning and characterization of fructose-1,6-bisphosphate aldolase from the hyperthermophilic archaeon Thermococcus kodakaraensis KOD1. Journal of Bioscience and Bioengineering, 2002, 94, 237-243.	2.2	28
69	Characterization of isocitrate dehydrogenase from the green sulfur bacterium Chlorobium limicola. FEBS Journal, 2002, 269, 1926-1931.	0.2	46
70	Kinetic and biochemical analyses on the reaction mechanism of a bacterial ATP-citrate lyase. FEBS Journal, 2002, 269, 3409-3416.	0.2	26
71	Characterization of isocitrate dehydrogenase from the green sulfur bacterium Chlorobium limicola. A carbon dioxide-fixing enzyme in the reductive tricarboxylic acid cycle. FEBS Journal, 2002, 269, 1926-1931.	0.2	6
72	Gene Cloning and Characterization of Fructose-1,6-Bisphosphate Aldolase from the Hyperthermophilic Archaeon Thermococcus kodakaraensis KOD1. Journal of Bioscience and Bioengineering, 2002, 94, 237-243.	2.2	17

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73	Characterization of 13 kDa Granule-Associated Protein inAeromonascaviaeand Biosynthesis of Polyhydroxyalkanoates with Altered Molar Composition by Recombinant Bacteria. Biomacromolecules, 2001, 2, 148-153.	5.4	61
74	Metal-binding properties of phytochelatin-related peptides. Journal of Inorganic Biochemistry, 2001, 86, 595-602.	3.5	51
75	ATP-citrate lyase from the green sulfur bacteriumChlorobium limicolais a heteromeric enzyme composed of two distinct gene products. FEBS Journal, 2001, 268, 1670-1678.	0.2	53
76	Crystallization and preliminary X-ray analysis of (R)-specific enoyl-CoA hydratase fromAeromonas caviaeinvolved in polyhydroxyalkanoate biosynthesis. Acta Crystallographica Section D: Biological Crystallography, 2001, 57, 145-147.	2.5	7
77	Crystal Structure of a Novel-Type Archaeal Rubisco with Pentagonal Symmetry. Structure, 2001, 9, 473-481.	3.3	82
78	Chitinase from Thermococcus kodakaraensis KOD1. Methods in Enzymology, 2001, 330, 319-329.	1.0	29
79	Different Cleavage Specificities of the Dual Catalytic Domains in Chitinase from the Hyperthermophilic Archaeon Thermococcus kodakaraensis KOD1. Journal of Biological Chemistry, 2001, 276, 35629-35635.	3.4	89
80	ATP-citrate lyase from the green sulfur bacterium Chlorobium limicola is a heteromeric enzyme composed of two distinct gene products. FEBS Journal, 2001, 268, 1670-1678.	0.2	1
81	Molecular cloning of two (R)-specific enoyl-CoA hydratase genes fromPseudomonas aeruginosaand their use for polyhydroxyalkanoate synthesis. FEMS Microbiology Letters, 2000, 184, 193-198.	1.8	116
82	Anti-phytochelatin monoclonal antibody. Biotechnology Letters, 2000, 22, 1423-1428.	2.2	2
83	Factors affecting the freeze-fracture morphology of in vivo polyhydroxyalkanoate granules. Canadian Journal of Microbiology, 2000, 46, 304-311.	1.7	21
84	Molecular cloning of two (R)-specific enoyl-CoA hydratase genes from Pseudomonas aeruginosa and their use for polyhydroxyalkanoate synthesis. FEMS Microbiology Letters, 2000, 184, 193-198.	1.8	3
85	Production of Biodegradable Polyester by a Transgenic Tobacco. Bioscience, Biotechnology and Biochemistry, 1999, 63, 870-874.	1.3	55
86	Co-expression of polyhydroxyalkanoate synthase and (R)-enoyl-CoA hydratase genes ofAeromonas caviaeestablishes copolyester biosynthesis pathway inEscherichia coli. FEMS Microbiology Letters, 1999, 170, 69-75.	1.8	77
87	Co-expression of 3-ketoacyl-ACP reductase and polyhydroxyalkanoate synthase genes induces PHA production inEscherichia coliHB101 strain. FEMS Microbiology Letters, 1999, 176, 183-190.	1.8	89
88	Title is missing!. Biotechnology Letters, 1999, 21, 579-584.	2.2	31
89	Biosynthesis of polyhydroxyalkanoates (PHA) by recombinant Ralstonia eutropha and effects of PHA synthase activity on in vivo PHA biosynthesis. International Journal of Biological Macromolecules, 1999, 25, 69-77.	7.5	79
90	Improved production of poly(4-hydroxybutyrate) by Comamonas acidovorans and its freeze-fracture morphology. International Journal of Biological Macromolecules, 1999, 25, 79-85.	7.5	37

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91	Ribulose bisphosphate carboxylase/oxygenase from the hyperthermophilic archaeon Pyrococcus kodakaraensis KOD1 is composed solely of large subunits and forms a pentagonal structure. Journal of Molecular Biology, 1999, 293, 57-66.	4.2	52
92	Co-expression of polyhydroxyalkanoate synthase and (R)-enoyl-CoA hydratase genes of Aeromonas caviae establishes copolyester biosynthesis pathway in Escherichia coli. FEMS Microbiology Letters, 1999, 170, 69-75.	1.8	1
93	A Unique Chitinase with Dual Active Sites and Triple Substrate Binding Sites from the Hyperthermophilic Archaeon <i>Pyrococcus kodakaraensis</i> KOD1. Applied and Environmental Microbiology, 1999, 65, 5338-5344.	3.1	154
94	Morphological and13C-nuclear magnetic resonance studies for polyhydroxyalkanoate biosynthesis inPseudomonassp. 61-3. FEMS Microbiology Letters, 1998, 164, 219-225.	1.8	18
95	Genetic Analysis of <i>Comamonas acidovorans</i> Polyhydroxyalkanoate Synthase and Factors Affecting the Incorporation of 4-Hydroxybutyrate Monomer. Applied and Environmental Microbiology, 1998, 64, 3437-3443.	3.1	38
96	Cloning and Molecular Analysis of the Poly(3-hydroxybutyrate) and Poly(3-hydroxybutyrate-<i>co</i>-3-hydroxyalkanoate) Biosynthesis Genes in<i>Pseudomonas</i>sp. Strain 61-3. Journal of Bacteriology, 1998, 180, 6459-6467.	2.2	205
97	Expression and Characterization of (<i>R</i>)-Specific Enoyl Coenzyme A Hydratase Involved in Polyhydroxyalkanoate Biosynthesis by <i>Aeromonas caviae</i>. Journal of Bacteriology, 1998, 180, 667-673.	2.2	196
98	Cloning and analysis of the poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) biosynthesis genes of Aeromonas caviae. Journal of Bacteriology, 1997, 179, 4821-4830.	2.2	260
99	Title is missing!. Biotechnology Letters, 1997, 19, 1093-1097.	2.2	45
100	Enzymatic preparation of d - p â€Š-trimethylsilylphenylalanine. Applied Microbiology and Biotechnology, 1997, 47, 114-119.	3.6	16
101	Production of a novel copolyester of 3-hydroxybutyric acid and medium-chain-length 3-hydroxyalkanoic acids by Pseudomonas sp. 61-3 from sugars. Applied Microbiology and Biotechnology, 1996, 45, 363-370.	3.6	277
102	Biosynthesis of Polyester Blends byPseudomonassp. 61-3 from Alkanoic Acids. Bulletin of the Chemical Society of Japan, 1996, 69, 515-520.	3.2	35
103	Enzymatic preparation of optically active silylmethanol derivatives having a stereogenic silicon atom by hydrolase-catalyzed enantioselective esterification. Tetrahedron: Asymmetry, 1994, 5, 73-82.	1.8	35
104	Enantioselective Bioconversion of Non-Natural Compounds. Biocatalysis, 1994, 9, 343-352.	0.9	5
105	Efficient kinetic resolution of organosilicon compounds by stereoselective esterification with hydrolases in organic solvent. Applied Microbiology and Biotechnology, 1993, 38, 482.	3.6	23
106	Bioconversion of Nonnatural Organic Compounds.. Annals of the New York Academy of Sciences, 1992, 672, 431-435.	3.8	2
107	Kinetic resolution of organosilicon compounds by stereoselective dehydrogenation with horse liver alcohol dehydrogenase. Applied Microbiology and Biotechnology, 1992, 38, 209-13.	3.6	21
108	Stereoselective esterification of halogen-containing carboxylic acids by lipase in organic solvent: effects of alcohol chain length. Applied Microbiology and Biotechnology, 1990, 34, 47.	3.6	48