

Publications

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1. Structure Analysis of a New Type of Vanadium Oxide by High Resolution Electron Microscopy.
Y. Fujiyoshi, K. Ishizuka and N. Uyeda
J. Electron microsc., **26**, 47-49 (1977).
2. The Alumina Supermicrogrid for High Resolution Electron Microscopy.
Y. Fujiyoshi, and N. Uyeda
J. Electron microsc., **27**, 75-82 (1978).
3. High Voltage Electron Microscopy for Image Discrimination of Constituent Atoms in Crystals and Molecules.
N. Uyeda, T. Kobayashi, K. Ishizuka and Y. Fujiyoshi
Chemica Scripta., **14**, 47-61 (1978/79).
4. Crystal Structure of Ag-TCNQ.
N. Uyeda, T. Kobayashi, K. Ishizuka and Y. Fujiyoshi
Nature, **285**, 95-97 (1980).
5. A New Method for Optimal-Resolution Electron Microscopy of Radiation-Sensitive Specimens.
Y. Fujiyoshi, T. Kobayashi, K. Ishizuka, N. Uyeda, Y. Ishida and Y. Harada
Ultramicroscopy, **5**, 459-468 (1980).
6. Digital Reconstruction of Bright Field Phase Contrast Images from High Resolution Electron Micrographs.
E. J. Kirkland, B. M. Siegel, N. Uyeda and Y. Fujiyoshi
Ultramicroscopy, **5**, 479-503 (1980).
7. Direct Imaging of Double-Strand DNA Molecule.
Y. Fujiyoshi and N. Uyeda
Ultramicroscopy, **7**, 189-192 (1981).
8. Fixation of Skeletal Muscle Actin in f-State by Chemical Cross-Linking with Bis-Imidoesters.
O. Ohara, S. Takahashi, T. Ooi and Y. Fujiyoshi
Biochem. Biophys. Research Communications, **100**, 988-994 (1981).
9. High Resolution TEM Images of Zinc-Phthalocyanine Polymorphs in Thin Films.
T. Kobayashi, Y. Fujiyoshi, K. Ishizuka and N. Uyeda
Acta Cryst. A37, 692-697 (1981).
10. Studies of Poly- γ -Methyl-L-Glutamate Monolayers by Infrared ATR and Transmission Spectroscopy and Electron Microscopy.
F. Takeda, M. Matsumoto, T. Takenaka and Y. Fujiyoshi
J. Colloid and Interface Science, **84**, 220-227 (1981).
11. Visualization of the DNA Thread Packing within Bacteriophage T4 Heads.
Y. Fujiyoshi, H. Yamagishi, T. Kunisada, H. Sugisaki, T. Kobayashi and N. Uyeda
J. Ultrastructure Research, **79**, 235-240 (1982).

12. Cross-Linking Study on Skeletal Muscle Actin: Properties of Suberimidate-Treated Actin.
O. Ohara, S. Takahashi, T. Ooi and Y. Fujiyoshi
***J. Biochem.*, 91, 1999-2012 (1982).**
13. Surface Enhanced Raman Scattering of Citrate Ions Adsorbed on Gold Sol Particles.
M. Mabuchi, T. Takenaka, Y. Fujiyoshi and N. Uyeda
***Surface Science*, 119, 150-158 (1982).**
14. The Observation of Molecular Orientation in Crystal Defects and Growth Mechanism of Thin Phthalocyanine Films.
T. Kobayashi, Y. Fujiyoshi and N. Uyeda
***Acta Cryst.*, A38, 356-362 (1982).**
15. Nonlinear High Resolution Image Processing of Conventional Transmission Electron Micrograph, II Experiment.
E. J. Kirkland, B. M. Siegel, N. Uyeda and Y. Fujiyoshi
***Ultramicroscopy*, 9, 65-74 (1982).**
16. Surface Pressure Dependence on Monolayer Structure of Poly- ϵ -Benzyloxycarbonyl-L-Lysine.
F. Takeda, M. Matsumoto, T. Takenaka, Y. Fujiyoshi and N. Uyeda
***J. Colloid and Interface Science*, 91, 267-271 (1983).**
17. High-Resolution Electron Microscopy of Structural Defects in Organic Crystals.
T. Kobayashi, Y. Fujiyoshi and N. Uyeda
***J. Crystal Growth*, 65, 511-517 (1983).**
18. High Resolution Observation of Cellulose Microfibrils.
J. Sugiyama, H. Harada, Y. Fujiyoshi and N. Uyeda
***Mokuzai Gakkaishi*, 30, 98-99 (1984).**
19. Electron Microscopy of tRNA Crystals I: Thin Crystals Negatively Stained with Uranyl Acetate.
Y. Fujiyoshi, K. Morikawa, N. Uyeda, H. Ozeki and H. Yamagishi
***Ultramicroscopy*, 12, 201-212 (1984).**
20. Electron Microscopy of tRNA Crystals II:
4Å Resolution Diffraction Pattern and Substantial Stability to Radiation Damage.
Y. Fujiyoshi, N. Uyeda, K. Morikawa and H. Yamagishi
***J. Mol. Biol.*, 172, 347-354 (1984).**
21. Surface Enhanced Raman Scattering by Isomeric Monobromopyridines Adsorbed on Gold and Silver Sol Particles.
T. Takenaka, E. Eda, M. Mabuchi, Y. Fujiyoshi and N. Uyeda
***Bull. Inst. Chem. Res., Kyoto Univ.*, 62, 219-232 (1984).**
22. High Resolution Imaging and Interpretation of Regular and Irregular Structures in n-Niobium Pentoxide Crystal.
N. Uyeda, Y. Fujiyoshi and K. Ishizuka
***Ultramicroscopy*, 15, 139-150 (1984).**

23. Various Types of 5S rRNA Crystals as Studied by X-ray Diffraction and Electron Microscopy.
K. Morikawa, Y. Fujiyoshi, K. Ishizuka, M. Kwakami and S. Takemura
Nucleic Acids Res., **15**, 143-146 (1984).
24. Improved High Resolution Image Processing of Bright Field Electron Micrographs: Part II Experiment.
E. J. Kirkland, B. M. Siegel, N. Uyeda and Y. Fujiyoshi
Ultramicroscopy, **17**, 87-104 (1985).
25. Some Remarks on Imogolite Mesophase.
K. Kajiwara, N. Donkay, Y. Fujiyoshi and H. Inagaki
Bull. Inst. Chem. Res., Kyoto Univ., **63**, 320-331 (1985).
26. Observations of Cellulose Microfibrils in *Valonia macrophysa* by High resolution Electron Microscopy.
J. Sugiyama, H. Harada, Y. Fujiyoshi and N. Uyeda
Mokuzai Gakkaishi, **31**, 61-67 (1985).
27. Direct Molecular Imaging of Low Dimensional Solids by High Resolution Electron Microscopy.
N. Uyeda, T. Kobayashi, K. Ishizuka, Y. Fujiyoshi, H. Inockuchi and G. Saito
Mol. Cryst. Liq. Cryst., **125**, 103-112 (1985).
28. Electron Microscopic Study of 5S rRNA Crystals from *Thermus thermophilus* HB8.
K. Morikawa, Y. Fujiyoshi, K. Ishizuka, M. Kawakami and S. Takemura
Journal of Microscopy, **142**, 247-258 (1985).
29. Lattice Images from Ultrathin Sections of Cellulose Microfibrils in the Cell Wall of *Valonia Macrophysa* Kütz.
J. Sugiyama, H. Harada, Y. Fujiyoshi and N. Uyeda
Planta, **166**, 161-168 (1985).
30. Lyotropic Mesophase of Imogolite, 2 Microscopic Observation of Imogolite Mesophase.
K. Kajiwara, N. Donkai, Y. Fujiyoshi and H. Inagaki
Makromol. Chem. **187**, 2895-2907 (1986).
31. Holes in a Stearic Acid Monolayer Observed by Dark-Field Electron Microscopy.
N. Uyeda, T. Takenaka, K. Aoyama, M. Matsumoto and Y. Fujiyoshi
Nature, **327**, 319-321 (1987).
32. Formation and Structure of a 2,3,9,10,16,17,23,24-Octacyanophalocyanine-Potassium Complex in Thin Film.
M. Ashida, Y. Uyeda, H. Yanagi, N. Uyeda, Y. Fujiyoshi and J. R. Fryer
Acta Crystallographica, **B44**, 146-151 (1988).
33. Direct Observation of Gold Sol by Cryo-Electron Microscopy.
Y. Tahara and Y. Fujiyoshi
Bull. Inst. Chem. Res., Kyoto Univ., **66**, 598-604 (1989).
34. High Resolution Cryo-Electron Microscopy for Biological Macromolecules.
Y. Fujiyoshi
J. Electron Microsc., **38**, 97-101 (1989).

35. Image Deconvolution of a Single High-Resolution Electron Micrograph.
Y. Liu, S. Xiang, H. Fan, D. Tang, F. Li, Q. Pan, N. Uyeda and Y. Fujiyoshi
Acta Crystallographica, **A46**, 459-463 (1990).
36. Image Resolution Enhancement by Combining Information from Electron Diffraction Pattern and Micrograph.
H. Fan, S. Xiang, F. Li, Q. Pan, N. Uyeda and Y. Fujiyoshi
Ultramicroscopy, **36**, 361-365 (1991).
37. Development of a Superfluid Helium Stage for High-Resolution Electron Microscopy.
Y. Fujiyoshi, T. Mizusaki, K. Morikawa, H. Yamagishi, Y. Aoki, H. Kihara and Y. Harada
Ultramicroscopy, **38**, 241-251 (1991).
38. A Method for Observing Cross-Sectional Views of Biomembranes.
K. Sakata, Y. Tahara, K. Morikawa, Y. Fujiyoshi and Y. Kimura
Ultramicroscopy, **45**, 253-261 (1992).
39. Functional Signal Peptide Reduces Bilayer Thickness of Phosphatidylcholine Liposome.
Y. Tahara, M. Murata, S. Onishi, Y. Fujiyoshi, M. Kikuchi, and Y. Yamamoto
Biochemistry, **31**, 8747-8754 (1992).
40. Methods for Orienting Purple Membrane in Vitreous Ice.
K. Sakata, Y. Kimura and Y. Fujiyoshi
Bull. Inst. Chem. Res., **70**, 257-269 (1992).
41. Dark-Field Electron Microscopy of Langmuir-Blodgett Films of Fatty Acids and Their Barium Salts.
M. Matsumoto, N. Uyeda, Y. Fujiyoshi and K. Aoyama
Thin Solid Films, **223**, 358-367 (1993).
42. A pH Induced Two-Dimensional Crystal of Membrane-Bound Na^+ , K^+ -ATPase of Dog Kidney.
Y. Tahara, S. Ohnishi, Y. Fujiyoshi, Y. Kimura and Y. Hayashi
FEBS Letters, **320**, 17-22 (1993).
43. Epitaxial Growth of Tetraphenylmetalporphyrin Films Vapor-Deposited on Alkali Halides.
S. Hyashi, H. Yanagi, Y. Ueda, Y. Fujiyoshi and M. Ashida
Ultramicroscopy, **49**, 308-317 (1993).
44. Fine Structure of Influenza A Virus Observed by Electron cryo-Microscopy.
Y. Fujiyoshi, N. P. Kume, K. Sakata and S. B. Sato
EMBO Journal, **13**, 318-326 (1994).
45. Projection Structure of Human Immunodeficiency Virus Type 1 (HIV-1) Observed with High Resolution Electron Cryo-Microscopy.
T. Goto, T. Ashina, Y. Fujiyoshi, N. P. Kume, H. Yamagishi and M. Nakai
J. Electron Microsc., **43**, 16-19 (1994).
46. Atomic Model of Plant Light-Harvesting Complex by electron crystallography.
W. Kühlbrandt, Da Neng Wang and Y. Fujiyoshi
Nature, **367**, 614-621 (1994).

47. A new method to measure bilayer thickness: cryo-electron microscopy of frozen hydrated liposomes and image simulation.
Y. Tahara and Y. Fujiyoshi
***Micron*, 25, 141-149 (1994).**
48. Characterization of a *de novo* Designed Protein.
T. Tanaka, H. Kimura, M. Hayashi, Y. Fujiyoshi, K. Fukuhara and H. Nakamura
***Protein Science*, 3, 419-427 (1994).**
49. A Method for 2D-Crystallization of Soluble Proteins at Liquid-Liquid Interface.
K. Aoyama, K. Ogawa, Y. Kimura and Y. Fujiyoshi
***Ultramicroscopy*, 57, 345-354 (1995).**
50. Cryogenic Transmission Electron Microscopic Studies of Micellar Structure Correlated with Solution Viscosity on Perfluorooctyl Sulfonates and Their Mixtures with a Nonionic Surfactant.
A. Knoblich, M. Matsumoto, K. Murata and Y. Fujiyoshi
***Langmuir*, 11, 2361-2366(1995).**
51. The Structure of the R-type Straight Flagellar Filament of Salmonella at 9Å Resolution by Electron Cryomicroscopy.
Y. Mimori, I. Yamashita, T. Akiba, K. Murata, Y. Fujiyoshi, K. Yonekura,
C. Toyoshima and K. Namba
***J. Mol. Biol.*, 249, 69-87 (1995).**
52. Observation of Micelles of Surfactin, an Anionic Lipopeptide, with Electron Cryo-Microscope.
A. Knoblich, M. Matsumoto, R. Ishiguro, K. Murata, Y. Fujiyoshi, Y. Ishigami and M. Osman
***Colloids and Surfaces B; Biointerfaces*, 5, 43-48 (1995).**
53. Two-Dimensional Crystals of the Kdp-ATPase of *Escherichia coli*.
A. H. Iwane, I. Ikeda, Y. Kimura, Y. Fujiyoshi, K. Altendorf and W. Epstein
***FEBS Letters*, 396, 172-176 (1996).**
54. Direct Interaction of Flagellin Termini Essential for Polymorphic Ability of Flagellar Filament.
Y. M. Kiyosue, F. Vonderviszt, I. Yamashita, Y. Fujiyoshi, and K. Namba
***Proc. Natl. Acad. Sci. USA*, 93, 15108-15113 (1996).**
55. Examination of the LeafScan 45, a Line-Illuminating Micro-Densitometer, for Its Use in Electron Crystallography.
K. Mitsuoka, K. Murata, Y. Kimura, K. Namba, Y. Fujiyoshi
***Ultramicroscopy*, 68, 109-121 (1997).**
56. The Three-Dimensional Structure of Aquaporin 1.
T. Walz, T. Hirai, K. Murata, J. B. Heymann, K. Mitsuoka, Y. Fujiyoshi, B. L. Smith,
P. Agre and A. Engel
***Nature*, 387, 624-627 (1997).**
57. Surface of Bacteriorhodopsin Revealed by High-Resolution Electron Crystallography.
Y. Kimura, D. G. Vassilyev, A. Miyazawa, A. Kidera, M. Matsushima, K. Mitsuoka,
K. Murata, T. Hirai and Y. Fujiyoshi

Nature, **389**, 206-211 (1997).

58. The 3.0 Å Projection Structure of Microsomal Glutathione Transferase as Determined by Electron Crystallography of $p2_12_12$ Two-dimensional Crystals.
H. Hebert, I. Schmidt-Krey, R. Morgenstern, K. Murata, T. Hirai, K. Mitsuoka and Y. Fujiyoshi
J. Mol. Biol., **271**, 751-758 (1997).
59. High Resolution Structure of Bacteriorhodopsin Determined by Electron Crystallography.
Y. Kimura, D. G. Vassilyev, A. Miyazawa, A. Kidera, M. Matsushima, K. Mitsuoka, K. Murata, T. Hirai and Y. Fujiyoshi
Photochemistry and Photobiology, **66**, 764-767 (1997).
60. Characterization of Human Endothelin B Receptor and Mutant Receptors Expressed in Insect Cells.
T. Doi, Y. Hiroaki, I. Arimoto, Y. Fujiyoshi, T. Okamoto, M. Satoh and Y. Furuichi
Eur. J. Biochem, **248**, 139-148 (1997).
61. Details of the Arrangement of the Outer Capsid of Rice Dwarf Phytoreovirus, as Visualized by Two-dimensional Crystallography.
Y. Zhu, A. M. Hemmings, K. Iwasaki, Y. Fujiyoshi, B. Zhong, J. Yan, M. Isogai and T. Omura
J. Virol. **71**, 8899-8901 (1997).
62. Projection Map of the Reaction Center-Light Harvesting Complex from *Rhodospseudomonas Viridis* at 10 Å resolution.
I. Ikeda, T. Odahara, K. Mitsuoka, Y. Fujiyoshi and K. Murata
FEBS Letters, **425**, 505-508 (1998).
63. Expression, Purification, and Reconstitution of Receptor for Pituitary Adenylate Cyclase-activating Polypeptide = Large-scale Purification of a Functionally Active G protein-coupled Receptor Produced in Sf9 Insect Cells =.
T. Ohtaki, K. Ogi, Y. Masuda, K. Mitsuoka, Y. Fujiyoshi, C. Kitada, H. Sawada, H. Onda and M. Fujino
J. Biol. Chem., **273**, 15464-15473 (1998).
64. Role of the Outermost Subdomain of *Salmonella* Flagellin in the Filament Structure Revealed by Electron Cryomicroscopy.
Y. M. Kiyosue, I. Yamashita, Y. Fujiyoshi, S. Ymaguchi and K. Namba
J. Mol. Biol., **284**, 521-530 (1998).
65. Interactions of Endothelin Receptor Subtypes A and B with G_i , G_o , and G_q in Reconstituted Phospholipid Vesicles.
T. Doi, H. Sugimoto, I. Arimoto, Y. Hiroaki and Y. Fujiyoshi
Biochemistry, **38**, 3090-3099 (1999).
66. Influence of Various Nucleotides on the *in situ* Crystallization of Ca^{2+} -ATPase.
Y. Hiroaki, K. Mitsuoka, Y. Cheng, H. Hiroaki and Y. Fujiyoshi
Biochemica et Biophysica Acta, **1415**, 361-368 (1999).
67. The Structure of Bacteriorhodopsin at 3.0 Å Resolution Based on Electron Crystallography: Implication of the Charge Distribution.

K. Mitsuoka, T. Hirai, K. Murata, A. Miyazawa, A. Kidera, Y. Kimura and Y. Fujiyoshi
J. Mol. Biol., **286**, 861-882 (1999).

68. Nicotinic Acetylcholine Receptor at 4.6 Å Resolution: Transverse Tunnels in the Channel Wall.
A. Miyazawa, Y. Fujiyoshi, M. Stowell and N. Unwin
J. Mol. Biol., **288**, 765-786 (1999).
69. Trehalose Embedding Technique for High-resolution Electron Crystallography.
T. Hirai, K. Murata, K. Mitsuoka, Y. Kimura and Y. Fujiyoshi
J. Electron Microsc., **48**, 653-658 (1999).
70. Molecular Structure of Proton Pump Revealed with Electron Crystallography.
Y. Fujiyoshi
The FASEB Journal, **13**, s191-s194 (1999).
71. The Structure of Aquaporin-1 at 4.5 Å Resolution Reveals Short α -Helices in the Center of the Monomer.
K. Mitsuoka, K. Murata, T. Walz, T. Hirai, P. Agre, J. B. Heymann, A. Engel
and Y. Fujiyoshi
J. Structural Biol., **128**, 34-43 (1999).
72. W276 Mutation in the Endothelin Receptor subtype B Impairs Gq Coupling but not Gi or Go Coupling.
F. Imamura, I. Arimoto, Y. Fujiyoshi and T. Doi
Biochemistry, **39**, 686-692 (2000).
73. The 11 Å resolution projection map of Na⁺/K⁺-ATPase calculated by application of single particle analysis to two-dimensional crystal images.
Y. Tahara, A. Oshima, T. Hirai, K. Mitsuoka, Y. Fujiyoshi and Y. Hayashi
J. Electron Microsc., **49**, 583-587 (2000).
74. The fold of human aquaporin 1.
B. L. de Groot, J. B. Heymann, A. Engel, K. Mitsuoka, Y. Fujiyoshi and H. Grubmueller
J. Mol. Biol. **300**, 987-994 (2000).
75. Structural determinants of water permeation through aquaporin-1.
K. Murata, K. Mitsuoka, T. Hirai, T. Walz, P. Agre, J. B. Heymann, A. Engel
and Y. Fujiyoshi
Nature, **407**, 599-605 (2000).
76. The three-dimensional map of microsomal glutathione transferase 1 at 6 Å resolution.
I. Schmidt-Krey, K. Mitsuoka, T. Hirai, K. Murata, Y. Cheng, Y. Fujiyoshi,
R. Morgenstern and H. Hebert
EMBO Journal, **19**, 6311-6316 (2000).
77. The voltage-sensitive sodium channel is a bell-shaped molecule with several cavities.
C. Sato, Y. Ueno, K. Asai, K. Takahashi, M. Sato, A. Engel and Y. Fujiyoshi
Nature, **409**, 1047-1051 (2001).
78. Ligand Binding of the Second PDZ Domain Regulates Clustering of PSD-95 with the Kvl.4

Potassium Channel.

F. Imamura, S. Maeda, T. Doi and Y. Fujiyoshi
J. Biol. Chem., **277**, 3640-3646 (2002).

79. Crystal structure of Homer 1 family conserved region reveals the interaction between EVH1 domain and own proline-rich motif.
K. Irie, T. Nakatsu, K. Mitsuoka, A. Miyazawa, K. Sobue, Y. Hiroaki, T. Doi, Y. Fujiyoshi and H. Kato
J. Mol. Biol., **318**, 1117-1126 (2002).
80. Functional role of internal water molecules in rhodopsin revealed by x-ray crystallography.
T. Okada, Y. Fujiyoshi, M. Silow, J. Navarro, E.M. Lauda and Y. Shichida
Proc. Natl. Acad. Sci. USA, **99**, 5982-5987 (2002).
81. Activation of the Nicotinic acetylcholine receptor involves a switch in conformation of the subunits.
N. Unwin, A. Miyazawa, J. Li and Y. Fujiyoshi
J. Mol. Biol., **319**, 1165-1176 (2002).
82. A new technique to co-localise membrane proteins with Homer/vesl.
Y. Hiroaki, K. Nishikawa, K. Mitsuoka, T. Tachibana, K. Sobue, T. Doi and Y. Fujiyoshi
Biochem. Biophys. Research Communications, **295**, 756-765 (2002).
83. Roles of Met-34, Cys-64, and Arg-75 in the Assembly of Human Connexin 26.
A. Oshima, T. Doi, K. Mitsuoka, S. Maeda and Y. Fujiyoshi
J. Biol. Chem., **278**, 1807-1816 (2003).
84. Regulated Interaction of Endothelin B Receptor with Caveolin-1.
T. Yamaguchi, Y. Murata, Y. Fujiyoshi and T. Doi
Eur. J. Biochem **270**, 1816-1827 (2003).
85. Structure and gating mechanism of the acetylcholine receptor pore.
A. Miyazawa, Y. Fujiyoshi and N. Unwin
Nature, **423**, 949-955 (2003).
86. Inositol 1,4,5-trisphosphate receptor contains multiple cavities and L-shaped ligand-binding domains.
C. Sato, K. Hamada, T. Ogura, A. Miyazawa, K. Iwasaki, Y. Hiroaki, K. Tani, A. Terauchi, Y. Fujiyoshi and K. Mikoshiba
J. Mol. Biol. **336**, 155-164 (2004).
87. Improved Specimen Preparation for Cryo-Electron Microscopy using a Symmetric Carbon Sandwich Technique.
N. Gyobu, K. Tani, Y. Hiroaki, A. Kamegawa, K. Mitsuoka, and Y. Fujiyoshi
J. Structural Biol., **146**, 325-333(2004).
88. Characterization and application of monoclonal antibodies against human endothelin B receptor expressed in insect cells.
T. Yamaguchi, I. A. Tahara, Y. Fujiyoshi and T. Doi
Biotechnology Letters, **26**, 293-299 (2004).

89. Proteomic analysis revealed a novel synaptic proline-rich membrane protein (PRR7) associated with PSD-95 and NMDA receptor.
Y. Murata, T. Doi, H. Taniguchi, and Y. Fujiyoshi
Biochem. Biophys. Research Communications, **327**, 183-191 (2005).
90. Expression and localization of an exogenous G protein-coupled receptor fused with the rhodopsin C-terminal sequence in the retinal rod cells of knockin mice.
T. Kodama, H. Imai, T. Doi, O. Chisaka, Y. Shichida and Y. Fujiyoshi
Experim. Eye Res., **80**, 859-869 (2005).
91. Electron tomography reveals diverse conformations of integrin α IIb β 3 in the active state.
K. Iwasaki, K. Mitsuoka, Y. Fujiyoshi, Y. Fujisawa, M. Kikuchi, K. Sekiguchi and T. Yamada
J. Structural. Biol., **150**, 259-267 (2005).
92. Lipid-protein interactions in double-layered two-dimensional AQP0 crystals.
T. Gonen, Y. Cheng, P. Sliz, Y. Hiroaki, Y. Fujiyoshi, S. C. Harrison and T. Walz
Nature, **438**, 633-638 (2005).
93. Essential Contribution of the Ligand-Binding β B/ β C Loop of PDZ1 and PDZ2 in the Regulation of Postsynaptic Clustering, Scaffolding, and Localization of Postsynaptic Density-95.
M. Nonaka, T. Doi, Y. Fujiyoshi, S. Takemoto-Kimura and H. Bito
J. Neurosci., **26**, 763-774 (2006).
94. Two-dimensional crystallization and analysis of projection images of intact *Thermus thermophilus* V-ATPase.
C. Gerle, K. Tani, K. Yokoyama, M. Tamakoshi, M. Yoshida, Y. Fujiyoshi and K. Mitsuoka
J. Struct. Biol., **153**, 200-206 (2006).
95. Implications of the Aquaporin-4 Structure on Array Formation and Cell Adhesion.
Y. Hiroaki, K. Tani, A. Kamegawa, N. Gyobu, K. Nishikawa, H. Suzuki, T. Walz, S. Sasaki, K. Mitsuoka, K. Kimura, A. Mizoguchi and Y. Fujiyoshi
J. Mol. Biol., **355**, 628-639 (2006).
96. Structural Basis for Detoxification and Oxidative Stress Protection in Membranes.
P. J. Holm, P. Bhakat, C. Jegerschoeld, N. Gyobu, K. Mitsuoka, Y. Fujiyoshi, R. Morgenstern and H. Hebert
J. Mol. Biol., **360**, 934-945 (2006).
97. Neurosteroid pregnenolone sulfate enhances glutamatergic synaptic transmission by facilitating presynaptic calcium currents at the calyx of Held of immature rats.
T. Hige, Y. Fujiyoshi and T. Takahashi
Eur. J. Neurosci., **24**, 1955-1966 (2006).
98. Aquaporin-11 containing a divergent NPA motif has normal water channel activity.
K. Yakata, Y. Hiroaki, K. Ishibashi, E. Sohara, S. Sasaki, K. Mitsuoka and Y. Fujiyoshi
Biochim. Biophys. Acta., **1768**, 688-693 (2007)
99. The TRPC3 channel has a large internal chamber surrounded by signal sensing antennas.
K. Mio, T. Ogura, S. Kiyonaka, Y. Hiroaki, Y. Tanimura, Y. Fujiyoshi, Y. Mori and C. Sato
J. Mol. Biol., **367**, 373-383 (2007)

100. Three-dimensional structure of a human connexin26 gap junction channel reveals a plug in the vestibule.
A. Oshima, K. Tani, Y. Hiroaki, Y. Fujiyoshi and G. E. Sosinsky
PNAS, **104**, 10034-10039 (2007)
101. Simulation of charge effects on density maps obtained by high-resolution electron crystallography.
T. Hirai, K. Mitsuoka, A. Kidera and Y. Fujiyoshi
J. Electron Microsc., **56**, 131-140 (2007).
102. Dodecamer rotor ring defines H⁺/ATP ratio for ATP synthesis of prokaryotic V-ATPase from *Thermus thermophilus*.
M. Toei, C. Gerle, M. Nakano, K. Tani, N. Gyobu, M. Tamakoshi, N. Sone, M. Yoshida, Y. Fujiyoshi, K. Mitsuoka and K. Yokoyama
PNAS, **104**, 20256-20261 (2007)
103. Formation of aquaporin-4 arrays is inhibited by palmitoylation of N-terminal cysteine residues.
H. Suzuki, K. Nishikawa, Y. Hiroaki and Y. Fujiyoshi
Biochem. Biophys. Acta., **1778**, 1181-1189 (2008).
104. Structural analysis of 2D crystals of gastric H⁺,K⁺-ATPase in different states of the transport cycle.
T. Nishizawa, K. Abe, K. Tani and Y. Fujiyoshi
J. Structural. Biol., **162**, 219-228 (2008).
105. Neuromyelitis optica and anti-aquaporin-4 antibodies measured by an enzyme-linked immunosorbent assay.
S. Hayakawa, M. Mori, A. Okuta, A. Kamegawa, Y. Fujiyoshi, Y. Yoshiyama, K. Mitsuoka, K. Ishibashi, S. Sasaki, T. Hattori and S. Kuwabara
J. Neuroimmun., **196**, 181-187 (2008).
106. Sendai virus F glycoprotein induces IL-6 production in dendritic cells in a fusion-independent manner.
H. Suzuki, M. Kurooka, Y. Hiroaki, Y. Fujiyoshi and Y. Kaneda
FEBS Lett., **582**, 1325-1329 (2008).
107. Projection Structure of a N-terminal Deletion Mutant of Connexin 26 Channel with Decreased Central Pore Density.
A. Oshima, K. Tani, Y. Hiroaki, Y. Fujiyoshi and G. E. Sosinsky
Cell Commun. Adhes., **15**, 85-93 (2008).
108. Dual inhibition of SNARE complex formation by tomosyn ensures controlled neurotransmitter release.
T. Sakisaka, Y. Yamamoto, S. Mochida, M. Nakamura, K. Nishikawa, H. Ishizaki, M. Okamoto-Tanaka, J. Miyoshi, Y. Fujiyoshi, T. Manabe and Y. Takai
J. Cell Biol., **183**, 323-337 (2008).
109. Pleomorphic configuration of the trimeric capsid proteins of *Rice dwarf virus* that allows formation of both the outer capsid and tubular crystals.
K. Iwasaki, N. Miyazaki, L. Hammar, Y. Zhu, T. Omura, B. Wu, F. Sjöborg, K. Yonekura, K. Murata, K. Namba, D. L. Caspar, Y. Fujiyoshi and R. H. Cheng.
J. Mol. Biol., **383**, 252-265 (2008).
110. Reconstruction of the P2X₂ Receptor Reveals a Vase-Shaped Structure with Lateral Tunnels above the Membrane.

K. Mio, T. Ogura, T. Yamamoto, Y. Hiroaki, Y. Fujiyoshi, Y. Kubo and C. Sato
Structure, **17**, 266-275 (2009).

111. Acetazolamide reversibly inhibits water conduction by aquaporin-4.
Y. Tanimura, Y. Hiroaki and Y. Fujiyoshi
J. Struct. Biol., **166**, 16-21 (2009).
112. Structure of the connexin-26 gap junction channel at 3.5 Å resolution.
S. Maeda, S. Nakagawa, M. Suga, E. Yamashita, A. Oshima, Y. Fujiyoshi and T. Tsukihara
Nature, **458**, 597-602 (2009).
113. Mechanism of Aquaporin-4's Fast and Highly Selective Water Conduction and Proton Exclusion.
K. Tani, T. Mitsuma, Y. Hiroaki, A. Kamegawa, K. Nishikawa, Y. Tanimura and Y. Fujiyoshi
J. Mol. Biol., **389**, 694-706 (2009).
114. Inter-subunit interaction of gastric H⁺,K⁺-ATPase prevents reverse reaction of the transport cycle.
K. Abe, K. Tani, T. Nishizawa and Y. Fujiyoshi.
EMBO J., **28**, 1637-1643 (2009).
115. Unusual thermal disassembly of the SPFH domain oligomer from *Pyrococcus horikoshii*.
Y. Kuwahara, S. Unzai, T. Nagata, Y. Hiroaki, H. Yokoyama, I. Matsui, T. Ikegami, Y. Fujiyoshi
and H. Hiroaki
Biophys. J., **97**, 2034-2043 (2009).
116. Triple N-Glycosylation in the Long S5-P Loop Regulates the Activation and Trafficking of the Kv12.2 Potassium Channel.
K. Noma, K. Kimura, K. Minatohara, H. Nakashima, Y. Nagao, A. Mizoguchi and Y. Fujiyoshi
J. Biol. Chem., **284**, 33139-33150 (2009).
117. Calyculin A-induced neurite retraction is critically dependent on actomyosin activation but not on polymerization state of microtubules.
A. Inutsuka, M. Goda and Y. Fujiyoshi
Biochem. Biophys. Res. Commun., **390**, 1160-1166 (2009).
118. Comparative study of the gating motif and C-type inactivation in prokaryotic voltage-gated sodium channels.
K. Irie, K. Kitagawa, H. Nagura, T. Imai, T. Shimomura and Y. Fujiyoshi.
J. Biol. Chem., **285**, 3685-3694 (2010).
119. Structural and functional characterization of H⁺,K⁺-ATPase with bound fluorinated phosphate analogs.
K. Abe, K. Tani and Y. Fujiyoshi.
J. Struct. Biol., **170**, 60-68 (2010).
120. Unique multipotent cells in adult human mesenchymal cell populations.
Y. Kuroda, M. Kitada, S. Wakao, K. Nishikawa, Y. Tanimura, H. Makinoshima, M. Goda, H. Akashi, A. Inutsuka, A. Niwa, T. Shigemoto, Y. Nabeshima, T. Nakahata, Y. Nabeshima, Y. Fujiyoshi and M. Dezawa
PNAS, **107**, 8639-8643 (2010).
121. Evidence for lateral mobility of voltage sensors in prokaryotic voltage-gated sodium channels.

H. Nagura, K. Irie, T. Imai, T. Simomura, T. Hige and Y. Fujiyoshi
Biochem. Biophys. Res. Commun., **399**, 341-346 (2010).

122. Human Umbilical Cord-Derived Mesenchymal Stromal Cells Differentiate into Functional Schwann Cells that Sustain Peripheral Nerve Regeneration.
D. Matsuse, M. Kitada, M. Kohama, K. Nishikawa, H. Makinoshima, S. Wakao, Y. Fujiyoshi, T. Heike, T. Nakahata, H. Akutsu, A. Umezawa, H. Harigae, J. Kira and M. Dezawa
J. Neuropathol. Exp. Neurol., **69**, 973-985 (2010).
123. Influence of the Cytoplasmic Domains of Aquaporin-4 on Water Conduction and Array Formation.
T. Mitsuma, K. Tani, Y. Hiroaki, A. Kamegawa, H. Suzuki, H. Hibino, Y. Kurachi and Y. Fujiyoshi
J. Mol. Biol., **402**, 669-681 (2010).
124. Asymmetric configurations and N-terminal rearrangements in connexin26 gap junction channels.
A. Oshima, K. Tani, M. M. Toloue, Y. Hiroaki, A. Smock, S. Inukai, A. Cone, B. J. Nicholson, G. E. Sosinsky and Y. Fujiyoshi
J. Mol. Biol., **405**, 724-735 (2011).
125. Conformational rearrangement of gastric H⁺,K⁺-ATPase induced by an acid suppressant.
K. Abe, K. Tani and Y. Fujiyoshi
Nature Commun., **2**, 155 pp1-7 (2011).
126. Arrangement and mobility of the voltage sensor domain in prokaryotic voltage-gated sodium channels.
T. Simomura, K. Irie, H. Nagura, T. Imai and Y. Fujiyoshi
J. Biol. Chem., **286**, 7409-7417 (2011).
127. Water permeability and characterization of aquaporin-11.
K. Yakata, K. Tani and Y. Fujiyoshi
J. Struct. Biol., **174**, 315-320 (2011).
128. Electron tomographic analysis of gap junctions in the lateral giant fibers of crayfish.
Y. Ohta, K. Nishikawa, Y. Hiroaki and Y. Fujiyoshi
J. Struct. Biol., **175**, 49-61 (2011).
129. Integumental reddish-violet coloration owing to novel dichromatic chromatophores in the teleost fish, *Pseudochromis diadema*.
M. Goda, M. Ohata, H. Ikoma, Y. Fujiyoshi, M. Sugimoto and R. Fujii.
Pigment Cell Melanoma Res., pp11-4 (2011).
130. Multilineage-differentiating stress-enduring (Muse) cells are a primary source of induced pluripotent stem cells in human fibroblasts.
S. Wakao, M. Kitada, Y. Kuroda, T. Shigemoto, D. Matsuse, H. Akashi, Y. Tanimura, K. Tsuchiyama, T. Kikuchi, M. Goda, T. Nakahata, Y. Fujiyoshi and M. Dezawa
PNAS, **108**, 9875-9880 (2011).
131. The carboxy-terminal helical bundle of the tetrameric prokaryotic sodium channel accelerates the inactivation rate.
K. Irie, T. Shimomura and Y. Fujiyoshi
Nature Commun., **3**, 793 pp1-8 (2012).

132. Gating movement of acetylcholine receptor caught by plunge-freezing.
N. Unwin and Y. Fujiyoshi
J. Mol. Biol., **422**, 617-634 (2012).
133. Cryo-EM structure of gastric H⁺,K⁺-ATPase with a single occupied cation binding site.
K. Abe, K. Tani T. Friedrich and Y. Fujiyoshi
PNAS, **109**, 18401-18406 (2012).
134. The four-transmembrane protein IP39 of *Euglena* forms strand by a trimeric unit repeat.
H. Suzuki, Y Ito, Y Yamazaki, K Mineta, M Uji, K. Abe, K. Tani, Y. Fujiyoshi and S. Tsukita
Nature Commun., **4**, 1766 pp1-8 (2013).
135. Oligomeric structure and functional characterization of *C. elegans* innexin-6 gap junction channels.
A. Oshima, T Matsuzawa, K. Nishikawa and Y. Fujiyoshi
J. Biol. Chem., **288**, 10513-10521 (2013).
136. Novel dichromatic chromatophores in the integument of mandarin fish *Synchiropus splendidus*.
M. Goda, Y. Fujiyoshi, M. Sugimoto and R. Fujii
Biol. Bull., **224**, 14-17 (2013).
137. Ligand binding of PDZ domains has various roles in the synaptic clustering of SAP102 and PSD-95
K. Mintoshara, S. Ichikawa, T. Seki, Y. Fujiyoshi and T. Doi
Neuroscience letters, **533**, 44-49 (2013).
138. Visualization of two distinct states of disassembly in the bacterial V-ATPase from *Thermus thermophilus*.
K. Tani, C. P. Arthur, M. Tamakoshi, K. Yokoyama, K. Mitsuoka, Y. Fujiyoshi and C. Gerle
Microscopy, **62**, 467-474 (2013).
139. Two alternative conformations of a voltage-gated sodium channel.
C.J. Tsai, K. Tani, K. Irie, Y. Hiroaki, T. Shimomura, D.G. McMillan, G.M. Cook, G.F.X. Schertler, Y. Fujiyoshi and X.D. Li
J. Mol. Biol., **425**, 4074-4088 (2013).
140. Carbon sandwich preparation preserves quality of two-dimensional crystals for cryo-electron microscopy.
F. Yang, K. Abe, K. Tani and Y. Fujiyoshi
Microscopy, **62**, 597-606 (2013).
141. Moyamoya disease-associated protein myosin/RNF213 Is a novel AAA+ ATPase, which dynamically changes its oligomeric state.
D. Morito, K. Nishikawa, J. Hoseki, A. Kitamura, Y. Kotani, K. Kiso, M. Kinjo, Y. Fujiyoshi and K. Nagata
Scie. Rep., **4**, 4442 (2014).
142. Crystal structure of a Claudin provides insight into the architecture of tight junctions.
H. Suzuki, T. Nishizawa, K. Tani, Y. Yamazaki, A. Tamura, R. Ishitani, N. Dohmae, S. Tsukita, O. Nureki and Y. Fujiyoshi

Science, **344**, 304-307 (2014).

143. Systematic Comparison of Molecular Conformations of H⁺,K⁺-ATPase Reveals an Important Contribution of the A-M2 Linker for the Luminal Gating.
K. Abe, K. Tani and Y. Fujiyoshi
J. Biol. Chem., **289**, 30590-30601(2014).
144. Model for the architecture of claudin-based paracellular ion channels through tight junctions.
H. Suzuki, K. Tani, A. Tamura, S. Tsukita and Y. Fujiyoshi
J. Mol. Biol., **427**, 291-297(2015).
145. Structural insight into tight junction disassembly by *Clostridium perfringens* enterotoxin.
Y. Saitoh, H. Suzuki, K. Tani, K. Nishikawa, K. Irie, Y. Ogura, A. Tamura, S. Tsukita and Y. Fujiyoshi
Science, **347**, 775-778 (2015).
146. Bovine F1Fo ATP synthase monomers bend the lipid bilayer in 2D membrane crystals.
C. Jiko, K.M. Davies, K. Shinzawa-Itoh, K. Tani, S. Maeda, D.J. Mills, T. Tsukihara, Y. Fujiyoshi, W. Kuhlbrandt and C. Gerle
eLife, **4**, e06119 (2015).
147. An Intracellular Domain with a Novel Sequence Regulates Cell Surface Expression and Synaptic Clustering of Leucine-Rich Repeat Transmembrane Proteins in Hippocampal Neurons.
K. Minatohara, Y. Murata, Y. Fujiyoshi and T. Doi
J. Neurochem., **134**, 618-628 (2015).
148. GraDeR: Membrane Protein Complex Preparation for Single-Particle Cryo-EM.
F. Hauer, C. Gerle, N. Fischer, A. Oshima, K. Shinzawa Itoh, S. Shimada, K. Yokoyama, Y. Fujiyoshi and H. Stark
Structure, **23**, 1769-1775 (2015).
149. Control of Spontaneous Ca²⁺ Transients Is Critical for Neuronal Maturation in the Developing Neocortex.
Y. Bando, K. Irie, T. Shimomura, H. Umeshima, Y. Kushida, M. Kengaku, Y. Fujiyoshi, T. Hirano and Y. Tagawa
Cereb. Cortex., **26**, 106-117 (2016).
150. Two-dimensional crystal structure of aquaporin-4 bound to the inhibitor acetazolamide.
A. Kamegawa, Y. Hiroaki, K. Tani and Y. Fujiyoshi
Microscopy, **65**, 177-184 (2016).
151. Characterization of physiologic phenotypes of dentate gyrus synapses of PDZ1/2 domain-deficient PSD-95 knockin mice.
H. Nagura, T. Doi and Y. Fujiyoshi
Eur. J. Neurosci., **43**, 618-625 (2016).
152. Claudin-21 has a paracellular channel role at tight junctions.
H. Tanaka, Y. Yamamoto, H. Kashihara, Y. Yamazaki, K. Tani, Y. Fujiyoshi, K. Mineta, K. Takeuchi, A. Tamura and S. Tsukita
Mol. Cell Biol., **36**, 954-964 (2016).

153. Hexadecameric structure of an invertebrate gap junction channel.
A. Oshima, T. Matsuzawa, K. Murata, K. Tani and Y. Fujiyoshi
J. Mol. Biol., **428**, 1227-1236 (2016).
154. Thermostabilization of the human endothelin type-B receptor.
A. Okuta, K. Tani, S. Nishimura, Y. Fujiyoshi and T. Doi
J. Mol. Biol., **428**, 2265-2274 (2016).
155. Molecular determinants of prokaryotic voltage-gated sodium channels for recognition of local anesthetics.
T. Shimomura, K. Irie and Y. Fujiyoshi
FEBS J., **283**, 2881-2895 (2016).
156. Activation mechanism of endothelin ETB receptor by endothelin-1.
W. Shihoya, T. Nishizawa, A. Okuta, K. Tani, N. Dohmae, Y. Fujiyoshi, O. Nureki and T. Doi
Nature, **537**, 363-368 (2016).
157. Atomic structure of the innexin-6 gap junction channel determined by cryo-EM.
A. Oshima, K. Tani and Y. Fujiyoshi
Nat. Commun., **7**, 13681 pp1-8 (2016).

(Reviews)

1. The Structural Study of Membrane Proteins by Electron Crystallography.
Y. Fujiyoshi
Adv. Biophys., **35**, 25-80 (1998).
2. Electron Crystallography of Membrane proteins.
Y. Fujiyoshi
G protein-Coupled receptors (CRC Press: Edited by T. Haga and G. Berstein),
323-354 (1999).
3. The Importance of Aquaporin Water Channel Protein Structures.
A. Engel, Y. Fujiyoshi and P. Agre
EMBO J. **19**, 800-806 (2000).
4. Two-dimensional crystals: a powerful approach to assess structure, function and dynamics of membrane proteins.
H. Stahlberg, D. Fotiadis, S. Scheuring, H. Remigy, T. Braun, K. Mitsuoka, Y. Fujiyoshi and A. Engel
FEBS Letters, **504**, 166-172 (2001).
5. Aquaporin water channels-from atomic structure to clinical medicine.
P. Agre, L. S. King, M. Yasui, W. B. Guggino, O. P. Ottersen, Y. Fujiyoshi, A. Engel and S. Nielsen
Journal of Physiology, **542.1**, 3-16 (2002).
6. Structure and function of water channels.
Y. Fujiyoshi, K. Mitsuoka, B. L. de Groot, A. Philippsen, H. Grubmüller, P.

Agre and A. Engel
***Current Opinion in Structural Biology*, 12, 509-515 (2002).**

7. Structural Genomics of Membrane Proteins.
Y. Kyogoku, Y. Fujiyoshi, I. Shimada, H. Nakamura, T. Tsukihara, H. Akutsu, T. Odahara, T. Okada and N. Nomura
***Accounts of Chemical Research*, 36, 199-206 (2003).**
8. Junction-forming aquaporins.
A. Engel, Y. Fujiyoshi, T. Gonen and T. Walz
***Current Opinion in Structural Biology*, 18, 229-235 (2008).**
9. Electron crystallography of proteins in membranes.
Y. Fujiyoshi and N. Unwin
***Current Opinion in Structural Biology*, 18, 587-592 (2008).**
10. The AQP structure and functional implications.
T. Walz, Y. Fujiyoshi and A. Engel
***Handb. Exp. Pharmacol.*, 190, 31-56 (2009).**
11. Electron crystallography and aquaporins
A. D. Schenk, R. K. Hite, A. Engel, Y. Fujiyoshi and T. Walz
***Methods in Enzymology*, 483, 91-119 (2010).**
12. Structural physiology based on electron crystallography.
Y. Fujiyoshi
***Protein Science*, 20, 806-817 (2011).**
13. Electron crystallography for structural and functional studies of membrane proteins.
Y. Fujiyoshi
***J. Electron microsc.*, 60 (Suppl. 1), S149-S159 (2011).**
14. Water channel structures analysed by electron crystallography.
K.Tani and Y. Fujiyoshi
***Biochim. Biophys. Acta.*, 1840, 1605-1613 (2014).**
15. Development of the field of structural physiology.
Y. Fujiyoshi
***Proc. Jpn. Acad. Ser. B. Phys. Biol. Sci.*, 91, 447-468 (2015).**
16. Cryo-electron microscopy for structure analyses of membrane proteins in the lipid bilayer.
K. Abe and Y. Fujiyoshi
***Cur. Opin. Struct. Biol.*, 39, 71-78 (2016).**
17. Crystal structures of claudins: insights into their intermolecular interactions.
H. Suzuki, K. Tani and Y. Fujiyoshi
***Ann. N. Y. Acad. Sci.*, (E-pub).**