＜研究業績リスト 2024 April Ver＞

西村　顕

〔I〕学術論文（査読有）

No.	題　　目	発 表 誌 名	巻 号 頁	発表年	著 者 名
1	パルス流動層の流動特性に及ぼすパルスサイクルならびに粒子層高の影響	化学工学論文集	**25**-3, 395-399.	1999	西村顕, 出口清一, 松田仁樹, 架谷昌信, Arun S. Mujumdar
2	パルス流動層の断続的流動下における気泡特性	化学工学論文集	**26**-1, 88-93.	2000	西村顕, 出口清一, 松田仁樹, 架谷昌信, Arun S. Mujumdar
3	パルス流動層の伝熱特性と気泡特性との相関	化学工学論文集	**26**-6, 830-836.	2000	西村顕, 出口清一, 松田仁樹, 架谷昌信, Arun S. Mujumdar
4	二次元パルス流動層の気泡特性と圧力・層変動	化学工学論文集	**28**-1, 121-124.	2002	西村顕, 星野博司, 小林敬幸, 架谷昌信
5	Heat Transfer Characteristics in a Pulsated Fluidized Bed in Relation to Bubble Characteristics	Heat Transfer Asian Research	**31**-4, 307-319.	2002	Akira Nishimura, Seiichi Deguchi, Hitoki Matsuda, Masanobu Hasatani, Arun S. Mujumdar
6	Sorption Drying of Soybean Seeds with Silica Gel. Part 1: Hydrodynamics of a Fluidized Bed Dryer	Drying Technology- an International Journal	**20**-6, 1193-1213.	2002	Zhanyong Li, Noriyuki Kobayashi, Akira Nishimura, Masanobu Hasatani
7	密閉型オシレート流動層の開発	化学工学論文集	**29**-4, 493-499.	2003	出口清一, 出口雅之, 西村顕, 藤間幸久

8	密閉型オシレート流動層の伝熱特性と気泡挙動との相関	化学工学論文集	**29**-4, 585-587.	2003	出口清一, 出口雅之, 磯部幹隆, 西村顕, 藤間幸久
9	循環流動層ライザ縮流部での下降粒子抑制最低ガス速度の定式化	化学工学論文集	**29**-5, 1-7.	2003	出口清一, 水野孝昭, 松岡久美, 西村顕, 那須英夫, 藤間幸久
10	A Method to Predict the Minimum Fluidization Velocity of Binary Mixture Based on Particle Packing Properties	Chemical Engineering Communications	**129**, 918-932.	2005	Zhanyong Li, Noriyuki Kobayashi, Akira Nishimura, Masanobu Hasatani
11	Comparison of Coal-Fired and Natural Gas-Fired Power Plants as Economically Viable and Ecologically Sustainable Power Generation Systems	International Journal of Emerging Electric Power Systems	**3**-2, Article 1116.	2005	Sate Sampattagul, Seizo Kato, Tanongkiat Kiatsiriroat, Naoki Maruyama, Akira Nishimura
12	CO_2改質性能におよぼすコーティングTiO_2膜作製条件の影響	化学工学論文集	**33**-2, 146-153.	2007	西村顕, 杉浦暢政, 藤田光将, 加藤征三, 加藤真示
13	金属担持を施したコーティングTiO_2膜のCO_2改質性能	化学工学論文集	**33**-5, 432-438.	2007	西村顕, 藤田光将, 加藤征三, 加藤真示
14	CO_2 Reforming into Fuel Using TiO_2 Photocatalyst and Gas Separation Membrane	Catalysis Today	**148**, 341-349.	2009	Akira Nishimura, Nobuyuki Komatsu, Go Mitsui, Masafumi Hirota, Eric Hu

15	サーモグラフィーによる固体高分子形燃料電池の in situ 温度面分布計測と温度面分布生成因子の解明	化学工学論文集	**35**-5, 442-453.	2009	西村顕, 竹内将幸, 澁谷健一, 廣田真史, 加藤征三, 中村義弘, 小島正嗣, 成田雅彦, 舘祐成, 葛山弘一
16	Solar Thermal Aided Power Generation	Applied Energy	DOI: 10.1016/j.apenergy.2009.10.025.	2009	Eric Hu, Yong Ping Yang, Akira Nishimura, Ferdi Yilmaz, Abbas Kouzani
17	Visualization of Temperature Distribution and Clarification of Heat and Mass Transfer Mechanism in a Single Cell of PEFC	Journal of Thermal Science and Technology	**4**-4, 438-452.	2009	Akira Nishimura, Kenichi Shibuya, Masayuki Takeuchi, Masafumi Hirota, Seizo Kato, Yoshihiro Nakamura, Hironari Tachi, Masahiko Narita
18	Life Cycle Assessment and Evaluation of Energy Payback Time on High-Concentration Photovoltaic Power Generation Systems	Applied Energy	DOI: 10.1016/j.apenergy.2009.08.011., 2797-2807.	2010	Akira Nishimura, Yasushi Hayashi, Kazuo Tanaka, Masafumi Hirota, Seizo Kato, Masakazu Ito, Kenji Araki, Eric J Hu

19	サーモグラフィーによる固体高分子形燃料電池単セル内温度面分布 in situ 計測（第 1 報，流入ガス流量とセパレーターのガス流路ピッチが温度面分布と発電性能に及ぼす影響評価）	日本機械学会論文集（B 編）	**76**-762, 342-351.	2010	西村顕, 澁谷健一, 森本淳志, 田中成季, 廣田真史, 中村義弘, 小島正嗣, 成田雅彦
20	Multi-point and Multi-Level Solar Integration into Conventional Power Point	Energy & Fuels	DOI: 10.1021/ef9012906.	2010	Qin Yan, Yongping Yang, Akira Nishimura, Abbas Kouzani, Eric Hu
21	Using TiO_2 Photocatalyst with Adsorbent to Oxidize Carbon Monoxide in Rich Hydrogen	Catalysis Today	DOI:10.1016/j.cattod.2010.03.076, **158**, pp.296-304.	2010	Akira Nishimura, Tomokazu Hisada, Masafumi Hirota, Mitsuhiro Kubota, Eric Hu
22	CO_2 Reforming Performance and Visible Light Responsibility of Cr-doped TiO_2 Prepared by Sol-Gel and Dip-Coating Method	International Journal of Chemical Engineering	DOI:10.1155/2010/309103, **2010**, Article ID 309103.	2010	Akira Nishimura, Go Mitsui, Masafumi Hirota, Eric Hu
23	Characteristics of Carbon Monoxide Oxidization in Rich Hydrogen by Mesoporous Silica with TiO_2 Photocatalyst	International Journal of Photoenergy	DOI:10.1155/2010/294217, **2010**, Article ID 294217, 9 pages.	2010	Akira Nishimura, Yutaka Yamano, Tomokazu Hisada, Masafumi Hirota, Eric Hu
24	Investigation on Impact of Separator Structure on In-plane Distribution of Coupling Phenomena in Single Cell of PEFC to Realize Uniform Distribution	Journal of Thermal Science and Technology	**5**-2, 319-341.	2010	Akira Nishimura, Kenichi Shibuya, Atsushi Morimoto, Shigeki Tanaka, Masafumi Hirota, Yoshihiro Nakamura, Masashi Kojima, Masahiko Narita

25	垂直上昇多分岐管における気液二相分配	混相流	**24**-5, 577-585.	2010	ズラズマン・ラズラン, 五島宏明, 廣田真史, 水野安浩, 丸山直樹, 西村顕, 磯部僚太
26	In-situ Measurement of In-plane Temperature Distribution in a Single-cell Polymer Electrolyte Fuel Cell Using Thermograph (1st Report: Impacts of Gas Flow Rate at Inlet and Gas Channel Pitch of Separator on In-Plane Temperature Distribution and Power Generation Performance)	Journal of Environment and Engineering	**6**-1, 1-16.	2011	Akira Nishimura, Kenichi Shibuya, Atsushi Morimoto, Shigeki Tanaka, Masafumi Hirota, Yoshihiro Nakamura, Masashi Kojima, Masahiko Narita
27	供給ガス条件とセパレーター構造が PEFC 単セル内温度面分布および発電性能に及ぼす影響評価	日本機械学会論文集（B 編）	**77**-776, 934-938.	2011	西村顕, 田中成季, 森本淳志, 大島淳, 廣田真史, 成田雅彦
28	Gas-Liquid Flow Distribution in Multiphase Channels with Vertical Upward Branches	The Open Transport Phenomena Journal	DOI:10.2174/1877729501103010017, **3**, 17-30.	2011	Zuradzman bin Mohamad Razlan, Hiroaki Goshima, Masafumi Hirota, Ryota Isobe, Yasuhiro Mizuno, Naoki Maruyama, Akira Nishimura

29	Effect of Preparation Condition of TiO_2 Film and Experimental Condition on CO_2 Reduction Performance of TiO_2 Photocatalyst Membrane Reactor	International Journal of Photoenergy	DOI:10.1155/2011/305650, **2011**, Article ID 305650, 14 pages.	2011	Akira Nishimura, Yuki Okano, Masafumi Hirota, Eric Hu
30	Experimental Study on Gas-Liquid Flow Distribution in Upward Multi-pass Channels	Journal of JSME Special Issue	SS79-SS85.	2011	Mohamad-Razlan Zuradzman, Ryota Isobe, Hiroaki Goshima, Masafumi Hirota, Yasuhiro Mizuno, Naoki Maruyama, Akira Nishimura
31	CO_2 Reforming Characteristics under Visible Light Response of Cr- or Ag-Doped TiO_2 Prepared by Sol-Gel and Dip-Coating Process	International Journal of Photoenergy	DOI:10.1155/2012/184169, **2011**, Article ID 184169, 12 pages.	2011	Akira Nishimura, Go Mitsui, Katsuya Nakamura, Masafumi Hirota, Eric Hu
32	セパレーターの表面処理とガス流路ピッチが固体高分子形燃料電池単セル内温度面分布と発電性能に及ぼす影響評価	日本機械学会論文集（B 編）	**77**-784, 2478-2492.	2011	西村顕, 田中成季, 近藤弘俊, 廣田真史
33	Dominant Factor and Mechanism of Coupling Phenomena in Single Cell of Polymer Electrolyte Fuel Cell	Applied Energy	DOI:10.1016/j.apenergy.2011.01.003, **90**, 73-79.	2012	Akira Nishimura, Kenichi Shibuya, Atsushi Morimoto, Shigeki Tanaka, Masafumi Hirota, Yoshihiro Nakamura, Masashi Kojima, Masahiko Narita, Eric Hu

34	Influence of Cell Components Structure on Heat and Mass Transfer Phenomena in Single-Cell PEFC	Journal of Energy and Power Engineering	**6**-4, 504-518.	2012	Akira Nishimura, Atsushi Morimoto, Shigeki Tanaka, Atsushi Oshima, Masafumi Hirota, Eiji Tohma, Yukio Kimura, Masahiko Narita
35	CO_2 Reforming Characteristics of Metal-Doped TiO_2 Coated on Netlike Glass Fiber under Visible Light	Journal of Photocatalysis Science	**3**-2, 81-94.	2012	Akira Nishimura, Wataru Fujita, Katsuya Nakamura, Masafumi Hirota, Eric Hu
36	Wind Turbine Power Output Assessment in Built Environment	Smart Grid and Renewable Energy	**4**-1, 1-10.	2013	Akira Nishimura, Takuya Ito, Junsuke Murata, Toshitake Ando, Yasunari Kamada, Masafumi Hirota, Mohan Kolhe
37	Numerical Study of Pressure Drop Mechanism and Cross Flow Behavior in the Gas Channel and Porous Medium of a Polymer Electrolyte Membrane Fuel Cell	Journal of Thermal Science and Technology	**8**-1, 209-224.	2013	K. M. Salahuddin, Akira Nishimura, Nobuyuki Oshima, Litan Kumar Saha
38	CFD Analysis of Double-Chambered Crematories Using Biomass Producer Gas as a Fuel	International Journal of Modern Engineering Research (IJMER)	**3**-6, 3493-3499.	2013	Yaowateera Achawangkul, Naoki Maruyama, Chatchawan Chaichana, Masafumi Hirota, Akira Nishimura, Pimpawat Teeratitayangkul

39	Impact of Building Layouts on Wind Turbine Power Output in the Built Environment: A Case Study of Tsu City	Journal of the Japan Institute of Energy	**94**, 315-322.	2014	Akira Nishimura, Takuya Ito, Masanobu Kakita, Junsuke Murata, Toshitake Ando, Yasunari Kamada, Masafumi Hirota, Mohan Kolhe
40	Modeling of Heat Transfer in Single Cell of Polymer Electrolyte Fuel Cell by Means of Temperature Data Measured by Thermograph	Journal of Chemical Engineering of Japan	**47**-7, 521-529.	2014	Akira Nishimura, Kazuhiro Iio, Masashi Baba, Taisuke Yamauchi, Masafumi Hirota, Eric Hu
41	Promotion and Control of Turbulent Mixing of Hot and Cold Airflows in T-junction	Journal of Fluid Science and Technology	DOI: 10.1299/jfst 0042, **9**-3.	2014	Takuya Matsuda, Masafumi Hirota, Hideo Asano, Shunichiro Hori, Naoki Maruyama, Akira Nishimura
42	Temperature Distributions in Single Cell of Polymer Electrolyte Fuel Cell Simulated by an 1D Multi-Plate Heat-Transfer Model and a 3D Numerical Simulation Model	Journal of Energy and Power Engineering	DOI: 10.17265/19 34-8975/201 5.08.002, **9**-8, 687-704.	2015	Akira Nishimura, Masashi Baba, Kotaro Osada, Takenori Fukuoka, Masafumi Hirota, Eric Hu
43	Optimization of Building Layouts to Increase Wind Turbine Power Output in the Built Environment Assumed to be Installed at Fukushima City and Tsu City in Japan	Smart Grid and Renewable Energy	DOI: 10.4236/sgr e.2015.6902 3, **6**, 279-292.	2015	Akira Nishimura, Masanobu Kakita, Junsuke Murata, Toshitake Ando, Yasunari Kamada, Masafumi Hirota, Mohan Lal Kolhe

44	Clarification on Temperature Distributions in Single Cell of Polymer Electrolyte Fuel Cell under Different Operation Conditions by Means of 1D Multi-Plate Heat-Transfer Model	Journal of Chemical Engineering of Japan	**48**-10, 862-871.	2015	Akira Nishimura, Takenori Fukuoka, Masashi Baba, Masafumi Hirota, Eric Hu
45	通常より高温で運転した際の固体高分子形燃料電池単セル内熱・物質移動特性	化学工学論文集	**41**-6, 397-405.	2015	西村顕, Amira Hakimi Mahadi, 長田康太郎, 馬場雅, 廣田真史
46	Impact of Overlapping Fe/TiO_2 Prepared by Sol-Gel and Dip-Coating Process on CO_2 Reduction	International Journal of Photoenergy	DOI:10.1155/2016/2392581, **2016**, Article ID 2392581, 12 pages.	2016	Akira Nishimura, Xuyan Zhao, Takuya Hayakawa, Noriaki Ishida, Masafumi Hirota, Eric Hu
47	Analysis on Temperature Distributions in Single Cell of Polymer Electrolyte Fuel Cell when Operated in High Temperature Range	Journal of Energy and Power Engineering	DOI:10.17265/1934-8975/2016.08.001, **10**, 453-464.	2016	Akira Nishimura, Kotaro Osada, Takuro Tsunoda, Masato Yoshimura, Masafumi Hirota, Eric Hu
48	Impact of Operation Condition on Temperature Distribution in Single Cell of Polymer Electrolyte Fuel Cell Operated at Higher Temperature than Usual	Mechanical Engineering Journal	DOI:10.1299/mej.16-00304, **3**-5, 14 pages.	2016	Akira Nishimura, Masato Yoshimura, Amir Hakimi Mahadi, Masafumi Hirota, Mohan Lal Kolhe

49	Gas-Liquid Flow Distribution Uniformity Parameters in Upward Multi-Pass Compact Evaporator	Jurnal Teknologi	DOI:10.11113/jt.v78.9755, **78**-10-3, 7-11.	2016	Zuradzman Mohamad Razlan, Hazry Desa, Shariman Abu Bakar, Khairunizam Wan, Ishak Ibrahim, R. Heng, Abadalsalam T. Hussain, Masafumi Hirota, Naoki Maruyama, Akira Nishimura
50	Energy Assessment of Building Integrated Photovoltaics and Fuel Cell Systems: Design Study for Building(s) of Mie, Japan	Smart Grid and Renewable Energy	DOI:10.4236/sgre.2017.85010, **8**-5, 129-144.	2017	Akira Nishimura, Satoshi Kitagawa, Masafumi Hirota, Mohan Lal Kolhe
51	An Energy Study Chain from Large Scale Photovoltaic Power Generation from Asian Cities to End Users in Japan	Smart Grid and Renewable Energy	DOI:10.4236/sgre.2017.85010, **8**-5, 145-162.	2017	Akira Nishimura, Takaki Yasui, Satoshi Kitagawa, Masafumi Hirota, Eric Hu
52	Numerical Analysis of Temperature Distributions in Single Cell of Polymer Electrolyte Fuel Cell when Operated in Elevated Temperature Range	Journal of Energy and Power Engineering	DOI:10.17265/1934-8975/2017.06.005, **11**-6, 393-408.	2017	Akira Nishimura, Kanji Patoriki Zamami, Masato Yoshimura, Masafumi Hirota, Mohan Lal Kolhe
53	Assessment on Energy Self-Sufficiency Rate for Building Integrated Photovoltaics and Fuel Cell Systems in Japan	Smart Grind and Renewable Energy	DOI:10.4236/sgre.2017.86013, **8**-6, 195-211.	2017	Akira Nishimura, Satoshi Kitagawa, Masafumi Hirota, Eric Hu

54	Effect of Fe Loading Condition and Reductants on CO_2 Reduction Performance with Fe/TiO_2 Photocatalyst	International Journal of Photoenergy	DOI:10.1155/2017/1625274, **2017**, Article ID 1625274, 11 pages	2017	Akira Nishimura, Noriaki Ishida, Daichi Tatematsu, Masafumi Hirota, Akira Koshio, Fumio Kokai, Eric Hu
55	大規模風力発電電力利用水電解水素とCO_2のメタネーションで製造した燃料の変換・輸送モデルの概算評価	日本エネルギー学会誌	**96**-9, 400-407	2017	西村顕, 森山達也, 嶋野純
56	風力発電電力利用水電解水素の変換・輸送方法の検討	化学工学論文集	**43**-6, 386-392	2017	西村顕, 森山達也, 嶋野純
57	Impact of Heat Transfer Media on Performance of Solar-Hydrogen Power Generation	Smart Grid and Renewable Energy	DOI:10.4236/sgre.2017.812023, **8**, 351-365.	2017	Akira Nishimura, Satoshi Kitagawa, Masafumi Hirota, Eric Hu
58	Impact of Relative Humidity of Supply Gas on Temperature Distribution in Single Cell of Polymer Electrolyte Fuel Cell when Operated at High Temperature	Journal of Energy and Power Engineering	DOI:10.17265/1934-8975/2017.11.004, **11**, 706-718.	2017	Akira Nishimura, Masato Yoshimura, Satoru Kamiya, Masafumi Hirota, Eric Hu
59	Impact of Thickness of Polymer Electrolyte Membrane on Temperature Distribution in Single Cell of Polymer Electrolyte Fuel Cell Operated at High Temperature	Journal of Energy and Power Engineering	DOI:10.17265/1934-8975/2018.02.004, **12**-2, 80-92.	2018	Akira Nishimura, Yusuke Sato, Masato Yoshimura, Satoru Kamiya, Masafumi Hirota

60	Experimental Study on Gas-Liquid Flow Distributions in Upward Multi-Pass Channels – Comparison of R-134a Flow and Air-Water Flow	Experimental Thermal and Fluid Science	**91**, 134-143.	2018	Z. M. Razlan, S. A. Bakar, H. Desa, W. K. Wan, I. Zunaidi, I. Ibrahim, N. S. Kamarrudin, M. J. M. Ridzuan, K. Takiguchi, T. Tsuchiya, Y. Kitaide, M. Hirota, N. Maruyama, A. Nishimura
61	Energy Characteristics of an Integrated Power Generation System with Photovoltaic and Fuel Cell	Smart Grid and Renewable Energy	**9**, 57-73.	2018	Akira Nishimura, Syota Tanikaga, Masafumi Hirota, Eric Hu
62	Effect of Overlapping Layout of Fe/TiO_2 on CO_2 Reduction with H_2 and H_2O	MOJ Solar and Photoenergy Systems	**3**-1, 1-8.	2019	Akira Nishimura, Daichi Tatematsu, Ryuki Toyoda, Masafumi Hirota, Akira Koshio, Fumio Kokai, Eric Hu
63	Optimum Reductants Ratio for CO_2 Reduction by Overlapped Cu/TiO_2	AIMS Materials Science	**6**-2, 214-233.	2019	Akira Nishimura, Ryuki Toyoda, Daichi Tatematsu, Masafumi Hirota, Akira Koshio, Fumio Kokai, Eric Hu

64	Impact of Thickness of Polymer Electrolyte Membrane and Gas Diffusion Layer on Temperature Distribution in Polymer Electrolyte Fuel Cell Operated at Temperature around 90 ℃	Journal of Energy and Power Engineering	DOI:10.17265/1934-8975/2019.03.002, **13**, 97-115.	2019	Akira Nishimura, Yusuke Sato, Satoru Kamiya, Tatsuya Okado, Kuhei Yamamoto, Masafumi Hirota, Eric Hu
65	Optimum Molar Ratio to Reduce CO_2 Using Pd/TiO_2	AIMS Materials Science	DOI:10.3934/matersci.2019.4.264, **6**-4, 464-483.	2019	Akira Nishimura, Tadaki Inoue, Yoshito Sakakibara, Masafumi Hirota, Akira Koshio, Fumio Kokai, Eric Hu
66	Heat and Mass Transfer Analysis in Single Cell of PEFC Using Different PEM and GDL at High Temperature	International Journal of Hydrogen Energy	DOI:10.1016/j.ijhydene.2019.05.192, **44**, 29631-29640.	2019	Akira Nishimura, Satoru Kamiya, Tatsuya Okado, Yusuke Sato, Masafumi Hirota, Mohan Lal Kolhe
67	Impact of Molar Ratio of NH_3 and H_2O on CO_2 Reduction Performance over Cu/TiO_2 Photocatalyst	Physics & Astronomy International Journal	**3**-5, 176-182.	2019	Akira Nishimura, Yoshito Sakakibara, Tadaaki Inoe, Masafumi Hirota, Akira Koshi, Fumio Kokai, Eric Hu
68	固体高分子電解質膜とガス拡散層の厚みが高温運転固体高分子形燃料電池単セル内温度分布に及ぼす影響	化学工学論文集	**45**-6, 227-237.	2019	西村顕, 神谷悟, 岡戸達哉, 山本航平, 廣田真史

69	MPL の有無が高温条件 PEFC 単セル内温度分布に与える影響の解析的検討	日本機械学会論文集	DOI:10.1299/transjsme.19-00278, **86**-883.	2020	西村顕, 山本航平, 岡戸達哉, 廣田真史
70	Impact of Pd Loading on CO_2 Reduction Perfromance over Pd/TiO_2 with H_2 and H_2O	molecules	DOI:10.3390/molecules25061468, **25**.	2020	Akira Nishimura, Tadaaki Inoe, Yoshito Sakakibara, Masafumi Hirota, Akira Koshio, Eric Hu
71	Impact of Operation Condition on Performance of CH_4 Dry Reforming Membrane Reactor for H_2 Production	Journal of Energy and Power Technology	DOI:10.21926/jept.2002008, **2**-2.	2020	Akira Nishimura, Satoshi Ohata, Kaito Okukura, Eric Hu
72	Numerical Analysis of Temperature Distributions in Single Cell of PEFC by Heat Transfer Model Considering Vapor Transfer	Journal of Energy and Power Engineering	DOI:10.17265/1934-8975/2020.01.001, **14**, 1-15.	2020	Akira Nishimura, Hiroya Fukuoka, Kohei Yamamoto, Tatsuya Okado, Yuya Kojima, Masafumi Hirota, Mohan Lal Kolhe
73	Impact of MPL on Temperature Distribution in Single Polymer Electrolyte Fuel Cell with Various Thickness of Polymer Electrolyte Membrane	energies	DOI:10.3390/en13102499, **13**-10.	2020	Akira Nishimura, Tatsuya Okado, Yuya Kojima, Masafumi Hirota, Eri Hu
74	Impact Analysis of MPL and PEM Thickness on Temperature Distribution within PEFC Operating at Relatively Higher Temperature	Energy	DOI:10.1016/j.energy.2020.117875.	2020	Akira Nishimura, Kohei Yamamoto, Tatsuya Okado, Yuya Kojima, Masafumi Hirota, Mohan Lal Kolhe

75	The Impact of Amount of Cu on CO_2 Reduction Performance of Cu/TiO_2 with NH_3 and H_2O	catalysts	DOI:10.3390/catal11050610, **11**-610.	2021	Akira Nishimura, Yoshito Sakakibara, Akira Koshio, Eric Hu
76	Comparison of CO_2 Reduction Performance with NH_3 and H_2O between Cu/TiO_2 and Pd/TiO_2	molecules	DOI:10.3390/molecules26102904, **26**-2904.	2021	Akira Nishimura, Ryoga Shimada, Yoshito Sakakibara, Akira Koshio, Eric Hu
77	Impact Analysis of MPL on a PEFC Cell's Temperature Distribution with Thin PEM and GDL for Operating at Higher Temperature than Usual	Journal of Energy and Power Engineering	DOI:10.17265/1934-8975/2021.02.001, **15**, 39-51.	2021	Akira Nishimura, Nozomu Kono, Kyohei Toyoda, Yuya Kojima, Mohan Lal Kolhe
78	Biogas Dry Reforming for Hydrogen through Membrane Reactor Utilizing Negative Pressure	fuels	DOI:10.3390/fuels2020000, **2**.	2021	Akira Nishimura, Tomohiro Takada, Satoshi Ohata, Mohan Lal Kolhe
79	Impact of Microporous Layer on Heat and Mass Transfer in a Single Cell of Polymer Electrolyte Fuel Cell Using a Thin Polymer Electrolyte Membrane and a Thin Gas Diffusion Layer Operated at a High-Temperature Range	ACS OMEGA	DOI:10.1021/acsomega.1c01693, **6**-22, 14575-14584.	2021	Akira Nishimura, Tatsuya Okado, Yuya Kojima, Eri Hu
80	垂直ヘッダ型多分岐管における気液二相冷媒流の分配－R410A と R134a における気液分配と圧力損失の比較－	日本冷凍空調学会論文集	DOI:10.11322/tjsrae.21-04NK_OA, **3**-2.	2021	小野寺亜由美, 澤原風花, 畠田崇史, 荒木勇人, 丸山直樹, 西村顕, 廣田真史

81	Numerical Simulation on Impacts of Thickness of Nafion Series Membranes and Relative Humidity on PEMFC Operated at 363 K and 373 K	energies	DOI:10.3390/en142856, **14**.	2021	Akira Nishimura, Kyohei Toyoda, Yuya Kojima, Syogo Ito, Eric Hu
82	Impacts of Separator Thickness on Temperature Distribution and Power Generation Characteristics of a Single PEMFC Operated at Higher Temperature of 363 and 373 K	energies	DOI:10.3390/en15041558, **15**.	2021	Akira Nishimura, Yuya Kojima, Syogo Ito, Eric Hu
83	Impact of Black Body Material Enhanced Gas Movement on CO_2 Photocatalytic Reduction Performance	catalysts	DOI:10.3390/catal12050470, **12**-470.	2022	Akira Nishimura, Takaharu Kato, Homare Mae, Eric Hu
84	垂直ヘッダ型多分岐管における気液二相冷媒流の分配－液相分配の均一性向上の試み－	日本冷凍空調学会論文集	DOI:10.11322/tjsrae.21-04NK_OA, **38**-2, 97-104.	2022	小野寺亜由美, 畠田崇史, 澤原風花, 丸山直樹, 西村顕, 廣田真史
85	太陽光発電電力由来水素サプライチェーンの実装可能性評価（LNG 気化冷熱利用の有効性評価）	化学工学論文集	**48**-3, 109-119.	2022	西村顕
86	Impact of Separator Thickness on Temperature Distribution in Single Cell of Polymer Electrolyte Fuel Cell Operated at Higher Temperature of 90 ℃ and 100 ℃	energies	DOI:10.3390/en151242203, **15**-4203.	2022	Akira Nishimura, Nozomu Kono, Kyohei Toyoda, Daiki Mishima, Mohan Lal Kolhe

87	Impact of Separator Thickness on Temperature Distribution in Single Polymer Electrolyte Fuel Cell Based on 1D Heat Transfer	Energy and Power Engineering	**14**, 248-273.	2022	Akira Nishimura, Daiki Mishima, Nozomu Kono, Kyohei Toyoda, Mohan Lal Kolhe
88	Numerical Analysis on Impact of Thickness of PEM and GDL with and without MPL on Coupling Phenomena in PEFC Operated at Higher Temperature such as 363 K and 373 K	energies	DOI:10.3390/en15165936, **15**-5936.	2022	Akira Nishimura, Kyohei Toyoda, Daiki Mishima, Syogo Ito, Eric Hu
89	LNG 冷熱を利用した風力発電電力由来水素サプライチェーンの有効性評価	化学工学論文集	**48**-5, 182-189.	2022	西村顕
90	Utilization from Ultraviolet to Infrared Light for CO_2 Reduction with P_4O_{10}/TiO_2 Photocatalyst	Physics & Astronomy International Journal	**6**-4, 145-154.	2022	Akira Nishimura, Homare Mae, Takahiro Kato, Eric Hu
91	Impact of Loading Amont of P_4O_{10} on CO_2 Reduction Performance of P_4O_{10}/TiO_2 with H_2O Extending Absorption Range from Ultraviolet to Infrared Light	Physics & Astronomy International Journal	**6**-4, 186-194.	2022	Akira Nishimura, Homare Mae, Ryo Hannyu, Eric Hu
92	Numerical Simulation on Effect of Separator Thickness on Coupling Phenomena in Single Cell of PEFC under Higher Temperature Operation Condition at 363 K and 373 K	energies	DOI:10.3390/en16020606, **16**-606	2023	Akira Nishimura, Daiki Mishima, Kyohei Toyoda, Syogo Ito, Mohan Lal Kolhe

93	Impact of Black Body Material on CO_2 Reduction Performance of P_4O_{10}/TiO_2 with NH_3	Journal of Physics and Chemistry Research	DOI:10.36266/JPCR/155, **5**, 1.	2023	Akira Nishimura, Ryo Hanyu, Homare Mae, Eric Hu
94	Numerical Analysis on Temperature Distribution in a Single Cell of PEFC Operated at Higher Temperature by 1D Heat Transfer and 3D Muti-Physics Simulation Model	Energy and Power Engineering	**15**, 205-227.	2023	Akira Nishimura, Kyohei Toyoda, Daiki Mishima, Eric Hu
95	垂直ヘッダ型多分岐管における気液二相冷媒流の分配－分岐管の加熱が液相分配に及ぼす影響－	日本冷凍空調学会論文集	DOI:10.1132/tjsrae.23-01_OA	2023	小野寺亜由美, 畠田崇史, 澤原風花, 森浩平, 丸山直樹, 西村顕, 廣田真史
96	An Energy Production System Powered by Solar Heat with Biogas Dry Reforming Reactor and Solid Oxide Fuel Cell	Smart Grid and Renewable Energy	**14**, 85-106.	2023	Akira Nishimura, Ryotaro Sato, Eric Hu
97	Performance Analysis of Hydrogen Production for a Solid Oxide Fuel Cell System Using a Biogas Dry Reforming Membrane Reactor with Ni and Ni/Cr Catalysts	fuels	DOI:10.3390/fuels4030019, **4,** 295-312	2023	Akira Nishimura, Yuki Hayashi, Syogo Ito, Mohan Lal Kolhe
98	Heat-Transfer Analysis of the Promotion of the CO_2 Reduction Performance of a P_4O_{10}/TiO_2 Photocatalyst Using as Black Body Material	catalysts	DOI:10.3390/catal13121477, **13**, 1477	2023	Akira Nishimura, Ryo Hanyu, Homare Mae, Hiroki Senoue, Eric Hu

99	Impact of Separator Thickness on Relationship between Temperature Distribution and Mass & Current Density Distribution in Single HT-PEMFC	Thermal Science and Engineering	DOI:10.24294/tse.v6i2.4424, **6**.	2024	Akira Nishimura, Daiki Mishima, Syogo Ito, Tsubasa Konbu, Eric Hu
100	CO_2 Reduction Performance with Double-Layered Cu/TiO_2 and P_4O_{10}/TiO_2 as Photocatalyts under Different Light Illumination Conditions	catalysts	DOI:10.3390/catal14027 0	2024	Akira Nishimura, Hiroki Senoue, Homare Mae, Ryo Hanyu, Eric Hu

〔II〕国際会議論文（査読有）

No.	題　　目	発 表 誌 名	巻 号 頁	発表年	共 著 者
1	Hydrodynamics and Heat Transfer Characteristics in a Pulsed Fluidized Bed as a Heat Exchanger	Proceedings of 6th China-Japan Symposium on Fluidization	69-74.	1997	Akira Nishimura, Seiichi Deguchi, Hitoki Matsuda, Masanobu Hasatani, Arun S. Mujumdar
2	Solid Flow Patterns and Heat Transfer Characteristics in a Pulsated Fluidized bed with Flowing Large Bubbles	Proceedings of 11th International Heat Transfer Conference	**4**, 485-490.	1998	Akira Nishimura, Seiichi Deguchi, Hitoki Matsuda, Masanobu Hasatani, Arun S. Mujumdar
3	Effects of Particle Properties on Hydrodynamic Behaviors and Heat Transfer Characteristics in Pulsated Fluidized Bed	Proceedings of 8th APCChE (Asian Pacific Confederation of Chemical Engineering) Congress	**3**, 1741-1744.	1999	Akira Nishimura, Seiichi Deguchi, Hitoki Matsuda, Noriyuki Kobayashi, Masanobu Hasatani, Arun S. Mujumdar
4	Bed Behavior and Particle Lateral Mixing in a Two-Dimensional Pulsed Fluidized Bed	Proceedings of 7th China-Japan Symposium on Fluidization	71-76.	2000	Hiroshi Hoshino, Akira Nishimura, Zhanyong Li, Noriyuki Kobayashi, Masanobu Hasatani
5	Gas-Solid Fluidization and Heat Transfer Characteristics in Closed Oscillating Fluidized Bed with High Amplitude and Low Frequencies	Proceedings of 7th Asian Conference on Fluidized-Bed & Three-Phase Reactors	101-106.	2000	Masayuki Deguchi, Seiichi Deguchi, Kana Tajima, Akira Nishimura, Yukihisa Fujima

6	Control of Downward-Flowing Particles in CFB by Contracting Riser Cross Sectional Area	Proceedings of 7th Asian Conference on Fluidized-Bed & Three-Phase Reactors	143-148.	2000	Takaaki Mizuno, Seiichi Deguchi, Yuichi Inaba, Akira Nishimura, Wojciech Nowak, Yukihisa Fujima
7	Enhancement of Heat and Mass Transfer by Using Pulsed Fluidized Bed	Proceedings of 6th World Congress of Chemical Engineering	CD-ROM, 1-6.	2001	Zhanyong Li, Akira Nishimura, Noriyuki Kobayashi, Fujio Watanabe, Masanobu Hasatani
8	Fluidization Characteristics in a Fluidized Bed of Dissimilar Particles	Proceedings of 13th International Drying Symposium	**A**, 587-595.	2002	Zhanyong Li, Noriyuki Kobayashi, Akira Nishimura, Seiichi Deguchi
9	Reforming of Carbon Dioxide into Fuel-Like Species with Photocatalyst	Proceedings of the 4th Asia Pacific Conference on Sustainable Energy and Environmental Technologies	24-28.	2003	Akira Nishimura, Seizo Kato, Masahiro Hagi, Nobumasa Sugiura
10	A Design Methodology of Environmentally Conscious Products for Co-Generation Systems	Proceedings of the 16th International Conference on Efficiency, Cost, Optimization, Simulation, and Environmental Impact of Energy Systems	**1**, 529-536.	2003	Anugerah Widiyanto, Yucho Sadamichi, Seizo Kato, Naoki Maruyama, Akira Nishimura

11	Environmental Impacts Evaluation of Electricity Grid Mix Systems in Four Selected Countries Using a Life Cycle Assessment Point of View	Proceedings of Third International Symposium on Environmentally Conscious Design and Inverse Manufacturing	26-33.	2003	Anugerah Widiyanto, Seizo Kato, Naoki Maruyama, Akira Nishimura, Sate Sampattagul
12	LCA Evaluation of Reuse/Recycle Impact for Environmental Conscious Industrial Products	Proceedings of Third International Symposium on Environmentally Conscious Design and Inverse Manufacturing	339-343.	2003	Yucho Sadamichi, Yukio Kimura, Anugerah Widiyanto, Seizo Kato, Naoki Maruyama, Akira Nishimura
13	The Decision-Making Tool for Power Generation Systems Improvement by Using LCA-NETS-GP-Index Method	Abstracts of SETAC Europe 14th Annual Meeting	198.	2004	Sate Sampattagul, Seizo Kato, Naoki Maruyama, Akira Nishimura, Tanongkiat Kiatsiriroat Anugerah Widiyanto
14	High Yield CO_2 Conversion into CH_4 by Photocatalyst Multilayer Film	Proceedings of 2nd International Energy Conversion Engineering Conference	CD-ROM, AIAA 2004-5619, 1-9.	2004	Akira Nishimura, Nobumasa Sugiura Seizo Kato, Naoki Maruyama, Shinji Kato
15	Environmental Impact Assessment of Independent Co-generation Systems Using LCA Method	Proceedings of 2nd International Energy Conversion Engineering Conference	CD-ROM, AIAA 2004-5552, 1-10.	2004	Naoki Maruyama, Yucho Sadamichi, Anugerah Widiyanto, Seizo Kato, Akira Nishimura

16	Photocatalyst Sol-Gel Multi Layers Film for High Yield CO_2 Conversion into CH_4	Proceedings of the 10th APCChE (Asian Pacific Confederation of Chemical Engineering) Congress	CD-ROM, 3P-13-006, 1-10.	2004	Akira Nishimura, Nobumasa Sugiura, Seizo Kato, Shinji Kato
17	Influence of Photocatalyst Film Forming Conditions on CO_2 Reforming	Proceedings of the 3rd International Energy Conversion Engineering Conference	CD-ROM, AIAA 2005-5536, 1-10.	2005	Akira Nishimura, Nobumasa Sugiura, Mitsumasa Fujita, Seizo Kato, Shinji Kato
18	Influence of Photocatalyst Film Forming Conditions on CO_2 Reforming Performance and Condensation of Reforming Product	Proceedings of the 4th International Energy Conversion Engineering Conference and Exhibit	CD-ROM, AIAA 2006-4123, 1-16.	2006	Mitsumasa Fujita, Akira Nishimura, Seizo Kato
19	Total Environmental Assessment of Life Cycle Impact for Power Generation in Japan	Proceedings of the 4th International Energy Conversion Engineering Conference and Exhibit	CD-ROM, AIAA 2006-4080, 1-5.	2006	Yucho Sadamichi, Naoki Maruyama, Akira Nishimura, Seizo Kato

20	Life Cycle Impact Assessment and Social Acceptability of Renewable Energy Power Plants in Japan	Proceedings of International Conference on Green and Sustainable Innovation	48-54.	2006	Soji Matsuda, Yucho Sadamichi, Naoki Maruyama, Akira Nishimura, Seizo Kato
21	An Approach to LCIA with Input Impacts Integrated	Proceedings of International Conference on Green and Sustainable Innovation	179-184.	2006	Yucho Sadamichi, Sate Sampattagul, Seizo Kato, Naoki Maruyama, Akira Nishimura
22	Life Cycle Inventory Analysis and Impact Assessment of Painting Plants, and Expert Software for Optimum Painting Process Selection	Proceedings of International Conference on Green and Sustainable Innovation	352-358.	2006	Naoki Maruyama, Yucho Sadamichi, Yuki Yamaoka, Ryuma Ito, Akira Nishimura, Seizo Kato
23	CO_2 Reforming into Fuel with the Aid of Photocatalyst Film and Gas Separation Membrane for Construction of Carbon Circulation System	Proceedings of the 6th Asia Pacific Conference on Sustainable Energy and Environmental Technologies	CD-ROM, RXN2, 1-6.	2007	Akira Nishimura, Mitsumasa Fujita, Seizo Kato
24	Investigation on Temperature Distribution Measured by Thermography and Simulation on Heat and Mass Transport Phenomena in a Single Cell of Polymer Electrolyte Fuel Cell	Proceedings of the 6th International Energy Conversion Engineering Conference	CD-ROM, AIAA 2008-5740, 1-19.	2008	Kenichi Shibuya, Akira Nishimura, Masayuki Takeuchi, Masafumi Hirota, Seizo Kato, Yoshihiro Nakamura, Hironari Tachi, Masahiko Narita

25	Visualization of Temperature Distribution and Clarification of Heat and Mass Transfer Mechanism in a Single Cell of PEFC	Proceedings of the Second International Forum on Heat Transfer	CD-ROM, Paper No. 126, 1-8.	2008	Akira Nishimura, Kenichi Shibuya, Masayuki Takeuchi, Masafumi Hirota, Seizo Kato, Yoshihiro Nakamura, Hironari Tachi, Masahiko Narita
26	Life Cycle Assessment and Evaluation of Energy Payback Time on High-Concentration Photovoltaic Power Generation System	Proceedings of the 4th International Green Energy Conference	CD-ROM, Paper ID 79, 1031-1042.	2008	Akira Nishimura, Yasushi Hayashi, Kazuo Tanaka, Masafumi Hirota, Seizo Kato, Masakazu Ito, Kenji Araki, Eric J Hu
27	Solar Thermal Aided Power Generation	Proceedings of the International Conference on Applied Energy	CD-ROM, 1-12.	2009	Eric Hu, Yong Ping Yang, Akira Nishimura, Ferdi Yilmaz
28	CO_2 Reforming into Fuel by Membrane Reactor Composed of TiO_2 Photocatalyst and Gas Separation Membrane	Abstracts of 10th International Conference on CO_2 Utilization	119.	2009	Akira Nishimura, Nobuyuki Komatsu, Go Mitsui, Masafumi Hirota
29	Clarification on Dominant Factor of Heat and Mass Transfer Phenomena in a Single Cell of PEFC	Abstract Book of the 7th Asia Pacific Conference on Sustainable Energy and Environmental Technologies	40.	2009	Akira Nishimura, Kenichi Shibuya, Atsushi Morimoto, Shigeki Tanaka, Masafumi Hirota, Yoshihiro Nakamura, Masashi Kojima, Masahiko Narita

30	Oxidization Characteristics of CO in H_2 by TiO_2 Photocatalyst Combined with Adsorbent	Abstract Book of the 7th Asia Pacific Conference on Sustainable Energy and Environmental Technologies	52.	2009	Akira Nishimura, Tomokazu Hisada, Masafumi Hirota, Mitsuhiro Kubota, Eric Hu
31	Clarification on Dominant Factor and Mechanism of Coupling Phenomena in Single Cell of Polymer Electrolyte Fuel Cell	Proceedings of International Conference on Applied Energy	CD-ROM, 1305-1314.	2010	Akira Nishimura, Kenichi Shibuya, Atsushi Morimoto, Shigeki Tanaka, Masafumi Hirota, Yoshihiro Nakamura, Masashi Kojima, Masahiko Narita
32	Gas-liquid Distribution in Upward Multi-Pass Channels of Compact Evaporator	Proceedings of 14th International Heat Transfer Conference	CD-ROM, paper ID: IHTC14 -22588, 1-9.	2010	Zuradzman Mohamad Razian, Ryota Isobe, Yasuhiro Mizuno, Hiroaki Goshima, Masafumi Hirota, Naoki Maruyama, Akira Nishimura
33	An Efficient Method to Generate Power from Low to Medium Temperature Solar and Geothermal Resources	Proceedings of Chemeca	CD-ROM, Paper # 138, 1-7.	2010	Eric Hu, Graham J. Nathan, David Battye, Gulliaume Perignon, Akira Nishimura

34	Experimental Study on Gas-Liquid Flow Distribution in Upward Multi-pass Channels	Proceedings of 5th International Symposium on Advanced Science and Technology in Experimental Mechanics	CD-ROM, Paper no. 28, 1-6.	2010	Zuradzmann Mohamad Razlan, Ryota Isobe, Hiroaki Goshima, Masafumi Hirota, Yasuhiro Mizuno, Naoki Maruyama, Akira Nishimura
35	Influence of Operation Condition and Structure of Cell Components on Coupling Phenomena in Single Cell of Polymer Electrolyte Fuel Cell	Proceedings of the 8th ASME-JSME Thermal Engineering Joint Conference	CD-ROM, AJTEC2011 -44416, 1-11.	2011	Akira Nishimura, Atsushi Morimoto, Shigeki Tanaka, Atsushi Oshima, Masafumi Hirota, Eiji Tohma, Yukio Kimura, Masahiko Narita
36	CO_2 Reforming under Visible Light Response of Cr- or Ag-Doped TiO_2 Prepared by Sol-Gel and Dip-Coating Method	Abstracts of Asia Pacific Conference on Sustainable Energy & Environmental Technologies	CD-ROM, A-117, 53.	2011	Akira Nishimura, Go Mitsui, Katsuya Nakamura, Masafumi Hirota, Eric Hu
37	Experimental Study on Gas-liquid Flow Distribution in Upward Multi-Pass Channel (Comparison of R-134a Flow and Air-Water Flow)	Proceedings of ASME-JSME-KSME Joint Fluids Engineering Conference 2011	CD-ROM, Paper no. AJK2011-32 008.	2011	Razlan Mohamad Zuradzman, Hiroaki Goshima, Koji Takiguchi, Toshiaki Tsuchiya, Motohide Okamoto, Masaaki Ajima, Yujiro Kitade, Masafumi Hirota, Naoki Maruyama, Akira Nishimura

38	Experimental Study on Gas-Liquid Flow Distribution in Upward Multi-pass Channel Comparison of R-134a Flow and Air-Water Flow	Proceedings of 6th International Symposium on Advanced Science and Technology in Experimental Mechanics	CD-ROM, Paper no. 74, 1-6.	2011	Razlan Mohamad Zuradzman, Hiroaki Goshima, Koji Takiguchi, Toshiaki Tsuchiya, Motohide Okamoto, Masaaki Ajima, Yujiro Kitade, Masafumi Hirota, Naoki Maruyama, Akira Nishimura
39	Effect of Surface Treatment and Gas Channel Pitch of Separator on Heat and Mass Transfer Phenomena in Single Cell PEFC under Power Generation	Proceedings of International Symposium on Eco Topia Science 2011	10P02-01, 219.	2011	Akira Nishimura, Shigeki Tanaka, Hirotoshi Kondo, Kazuhiro Iio, Masafumi Hirota
40	Experimental Study on Gas-Liquid Two Phase Flow Distributions in Mutli-Pass Channels	Proceedings of International Heat Transfer Forum 2012	CD-ROM, Paper no.92, 1-6.	2012	Y. Nakagawa, M-R. Zuradzman, M. Hirota, K. Takiguchi, T. Tsuchiya, M. Ajimra, Y. Kitade, M. Okamoto, N. Maruyama, A. Nishimura
41	Building Design to Promote Output of Wind Turbine Utilizing Wind Blowing through Buildings	Abstracts of the 9th Asia Pacific Conference on Sustainable Energy & Environmental Technologies	67.	2013	Akira Nishimura, Takuya Ito, Masanobu Kakita, Junsuke Murata, Toshitake Ando, Yasunari Kamada, Masafumi Hirota

42	Modeling of Heat Transfer in Single Cell of PEFC with Applying Temperature Data Measured by Thermograph	Proceedings of International Symposium on Innovative Materials for Processes in Energy Systems 2013	IIIC-P7, 465-473.	2013	Akira Nishimura, Kazuhiro Iio, Masashi Baba, Taisuke Yamauchi, Masafumi Hirota
43	Promotion and Control of Turbulent Mixing of Hot and Cold Airflows in T-Junction	Proceedings of 4th International Conference on Jets, Wakes and Separated Flows (ICJWSF 2013)	ICWSF2013 -1086, 6 pages.	2013	Takuya Matsuda, Masafumi Hirota, Hideo Asano, Shuichiro Hori, Naoki Maruyama, Akira Nishimura
44	Analysis on Temperature Distribution in Single Cell of PEFC under Different Gas Supply Conditions	Proceedings of Grand Renewable Energy 2014 International Conference	CD-ROM, P-Hf-11, 4 pages.	2014	Akira Nishimura, Taisuke Yamauchi, Masashi Baba, Masafumi Hirota
45	CO_2 Reforming into Fuel by Metal-Loaded TiO_2 Photocagtalyst Driven by Visible Light	Proceedings of The 10th Asia Pacific Conference on Sustainable Energy & Environmental Technologies	USB Memory, APCSEET 2015-9, 4 pages.	2015	Akira Nishimura, Takuya Hayakawa, Xuyan Zhao, Taiga Kitazumi, Masafumi Hirota, Akira Koshio, Fumio Kokai
46	Heat and Mass Transfer Characteristics in Single Cell of PEFC Using Nafion Membrane under High Temperature Operation Conditions	Proceedings of International Conference on Power Engineering	CD-ROM, ICOPE-15-1 033, 12 pages.	2015	Akira Nishimura, Amir Hakimi Mahadi, Kotaro Osada, Masashi Baba, Masafumi Hirota

47	Optimization of Building Layouts to Increase Wind Turbine Power Output in the Built Environment	Proceedings of The 4th Joint Conference on Renewable Energy and Nanotechnology	USB Memory, D-11, 4 pages.	2015	Akira Nishimura, Masanobu Kakita, Satoshi Kitagawa, Junsuke Murata, Toshitake Ando, Yasunari Kamada, Masafumi Hirota, Mohan Lal Kolhe
48	Experimental Study on Gas-Liquid Flow Distributions in Multi-Pass Channels	Proceedings of 24th IIR International Congress of Refrigeration	CD-ROM, 8 pages.	2015	Naoki Noda, Masafumi Hirota, Toshitake Tsuchiya, Yujiro Kitaide, Naoki Maruyama, Akira Nishimura
49	Gas-Liquid Two-Phase Flow Distributions in Multipass Channels	Proceedings of Asian Symposium on Computational Heat Transfer and Fluid Flow	CD-ROM, 8 pages.	2015	Masafumi Hirota, Naoki Noda, Toshitake Tsuchiya, Yujiro Kitaide, Naoki Maruyama, Akira Nishimura
50	Proposal and Feasibility Study on Solar Energy Utilization System Integrated with Building	Proceedings of 15th International Conference on Sustainable Energy (SET2016)	USB Memory, #55, 1 page.	2016	Akira Nishimura, Satoshi Kitagawa, Masafumi Hirota
51	Clarification on Temperature Distribution in Single Cell of PEFC by Heat Balance Model and CFD-ACE+	Proceedings of The 20th International Drying Symposium (IDS2016)	USB Memory, P2-41, 6 pages.	2016	Akira Nishimura, Kotaro Osada, Takuro Tsunoda, Masato Yoshimura, Masafumi Hirota

52	Grid Integration of PEM Fuel Cell with Multiphase Switching for Maximum Power Operation	Proceedings of POWERCORN 2016	USB Memory, Paper No.295, 5 pages.	2016	K. M. S. Konara, Mohan Lal Kolhe, Akira Nishimura
53	Gas-Liquid Distribution of Refrigerant Two-Phase Flow in Multi-Pass Channels	Proceedings of 4th International Forum on Heat Transfer	USB Memory, 6 pages.	2016	Yuki Nakao, Hidetaka Nomoto, Akira Ekawa, Masafumi Hirota, Naoki Maruyama, Akira Nishimura
54	Experimental Study on Distribution of Gas-Liquid Refrigerant Flows in Multi-Pass Channels	Proceedings of 1st Asian Conference on Thermal Science	USB Memory, 5 pages.	2017	Yuki Nakao, Akira Ekawa, Masafumi Hirota, Naoki Maruyama, Akira Nishimura
55	Prediction of Temperature Distribution in Single Cell of PEFC Operated under High Temperature	Proceedings of the 2nd International Conference on New Energy and Future Energy System	FES1431, 8-9.	2017	Akira Nishimura, Kanji Patoriki Zamami, Masato Yoshimura, Masafumi Hirota
56	Visual Observation of Refrigerant Gas-Liquid Flow Distributions in Multi-Pass Channels with Inner Pipe	Proceedings of 11th Pacific Symposium on Flow Visualization and Image Processing	USB Memory, 6 pages.	2017	Akira Ekawa, Masafumi Hirota, Naoki Maruyama, Akira Nishimura
57	Energy Assessment on Double Power Generation System of Building Integrated Photovoltaic and Fuel Cell	Abstract Book of Intenational Conference on Smart Technolgies for Energy,Environment &Sustainable Development	Paper ID 155, 44-45.	2018	Akira Nishimura

58	Design of Smart Building to Utilize Renewable Energy Source Effectively	Abstract Book of Intenational Conference on Smart Technolgies for Energy, Environment & Sustainable Development	Plenary Talk-III, 14.	2018	Akira Nishimura
59	Investigation on Reductants and Layout of Cu/TiO_2 for Improvement of CO_2 Reduction Perfromance	Proceedings of 16th International Conference on Carbon Dioxide Utilization	OP76, ID10, 1.	2018	Akira Nishimura, Ryuki Toyoda, Daichi Tatematsu, Masafumi Hirota, Akira Koshio, Fumio Kokai
60	Effect of Components Thickness on Heat and Mass Transfer Phenomena in Single Cell of PEFC Operated at High Temperature	Proceedings of 2018 International Symposium on Hydrogen Energy and Energy Technologies	83, https://doi.org/10.1051/e3sconf/20198301007, 11 pages.	2018	Akira Nishimura, Satoru Kamiya, Tatsuya Okado, Yusuke Sato, Masafumi Hirota
61	Experimental Investigation on Impact of Thickness of PEM and GDL on Temperature Distribution in Single PEFC Generated at High Temperature	Abstracts of 18th Asian Pacific Confederation of Chemical Engineering Congress	M225, 1 page.	2019	Akira Nishimura, Satoru Kamiya, Tatsuya Okado, Kouhei Yamamoto, Masafumi Hirota
62	Analysis on Impact of Components' Thickness on Temperature Distribution in Single Cell of PEFC at High Temperature Operation than Usual	Proceedings of the Fifth International Symposium on Innovative Materials and Processes in Energy Systems	USB Memory, C112, 4 pages.	2019	Akira Nishimura, Yusuke Sato, Kouhei Yamamoto, Satoru Kamiya, Tatsuya Okado, Masafumi Hirota

63	Approach to Promote CO_2 Reduction with H_2 and H_2O over Pd/TiO_2	Abstract Book of Intenational Conference on Materials and Systems for Sustainability	A3-P-5, 1 page.	2019	Akira Nishimura, Tadaaki Inoe, Yoshito Sakakibara, Masafumi Hirota, Akira Koshio, Fumio Kokai
64	Effect of MPL on Heat and Mass Transfer Characteristics of PEFC Changing PEM Thickness Operated at Higher Temperature than Usual	Proceedings of The 2nd Asian Conference on Thermal Science 2021	On-line, 2 pages.	2021	Akira Nishimura, Tatsuya Okado, Yuya Kojima, Masafumi Hirota
65	Gas-Liquid Distributions and Pressurte Loses of Refrigerant Flows in Multi-pass Channels with Vertical Headers	Prodeedings of The 2nd Asian Conference on Thermal Science 2021	50121, on-line, 2 pages.	2021	Ayumi Onodera, Fuuka Sawahara, Takafumi Hatada, Yuto Araki, Naoki Maruyama, Akira Nishimura, Masfumi Hirota
66	Assessement on Operation Conditiojns of CH_4 Dry Reformingh Mmebrane Reactor to Produce H_2	Proceedings of International Conference on Power Engieering	C231, on-line, 4 pages.	2021	Akira Nishimura, Satoshi Ohata, Tamohiro Takada
67	Effect of Pressure Difference Provided for Hydrogen Permeatiojn Membrane on Performance of Biogas Dry Reforming	Abstract Proceedings of International Conference on Materials and Systems for Sustainability	Paper ID: 1010, on-line, 1 page.	2021	Akira Nishimura, Yuki Hayashi, Tomohiro Takada

68	CO_2 Reduction into Fuel by Pd/TiO_2 Photocatalyst Changing the Combination of H^+ Provider	Abstract Book of The First Symposium on Carbon Utilization Technologies for the Global Environment	B5-3, 2 pages.	2021	Akira Nishimura, Tadaaki Inoue, Yoshito Sakakibara, Masafumi Hirota, Akira Koshio
69	Investigation on Impact of Operation Condition on Hydrogen Production from Biogas Dry Reforming in Membrane Reactor	Proceeddings of International Conference on Power Engineering (ICOPE-2023)	ICOPE-2023 -1011	2023	Akira Nishimura, Yuki Hayashi, Syogo Ito, Ryotaro Sato Souta Yamada
70	Gas-Liquid Distributions of Refrigerant Flows in Multi-pass Channels with Vertical Headers – Influence of Heating of Branch Tubes on Liquid Distribution Characteristics –	Proceedings of International Congress of Refrigeration 2023	10 pages.	2023	Ayumi Onodera, Takahumi Hatada, Kohei Mori, Masafumi Hirota, Akira Nishimura Naoki Maruyama
71	Development of Zone Air-Conditioning System for Factories Using Air Curtains	Proceedings of International Congress of Refrigeration 2023	12 pages.	2023	Yuudai Mori, Shigeyuki Nagasaka, Naoya Shinada, Jiang Zhang, Masazumi Gohdo, Hiroshi Nakayama, Tsuyoshi Ao, Kotohiko Murase, Mizuki Satoh, Kohki Komada, Masafumi Hirota, Akira Nishimura, Naoki Maruyama

72	Assessment on Energy System Consisting of Solar Collector, Biogas Dry Reforming Membrane Reactor and SOFC	Proceedings of International Conference on Materials and Systems for Sustainability (ICMaSS2023)	A4-1-3, 1 page.	2023	Akira Nishimura, Ryotaro Sato, Souta Yamada, Shogo Ito, Mkzuki Ichikawa

〔III〕国際会議論文（査読なし）

No.	題　　目	発 表 誌 名	巻 号 頁	発表年	共 著 者
1	Design of Smart Energy Supply to Utilize Renewable Energy Source Effectively	Integrating Doamin Knowledge for Managing Sustainable Energy	No Proceedings (Invited Speech)	2020	Akira Nishimura
2	Effect of MPL on Temperature Distribution in Single PEFC with Various Thickness of PEM and GDL Operated at Higher Temperature	11th International Conference on Power, Energy and Electric Engineering	No Proceedings (Invited Speech)	2021	Akira Nishimura
3	Heat Transfer Anaysis on Effect of MPL as well as Thickness of PEM and GDL on Temperature Distribution in Single Cell of PEFC Operated at Higher Temperature than Usual	2nd International Webinar on Energy	No Proceedings (Keynote Speech)	2021	Akira Nishimura
4	CO_2 Reduction Performance of Cu/TiO_2 Photocatalyst with NH_3 and H_2O	4th Edition of Applied Science and Engineering and Technology Webiner	No Proceedings (Kyenote Speech)	2021	Akira Nishimura
5	Renewable Hydrogen Supply Chain Utilizing LNG Cold Heat	Renewable and Sustainable Enegy Virtual 2021	No Proceedings (Invited Speech)	2021	Akira Nishimura

6	Approach to Optimize the Components Combination of PEFC for Target Operation Temperature Indicated by NEDO Road Map in Japan	The 6th International Conference on New Energy and Future Energy Systems	Abstract of the 6th International Conference on New Energy and Future Energy System (Invited Speech)	2021	Akira Nishimura
7	Numerical Analysis on Coupling Phenomena in Single Cell of PEFC under High Temperature Operation Condition than Usual	5th Edition of Appplied Science, Engineering and Technology Virtual	No Proceedings (Invited Speech)	2021	Akira Nishimura
8	Numerical Analysis of Through-plane Separator Shape on Temperature Distribution in Single Cell of Operated at Higher Temperature than Usual	3rd Global Webinar on Applied Science, Engineering and Technology	No Proceedings (Keynote Speech)	2022	Akira Nishimura
9	Impact of Components on Heat Transfer Phenomena in PEFC under Higher Temperature Operation than Usual	12th International Conference on Power, Energy and Electric Engineering	Abstract Book of 12th International Conference on Power, Energy and Electric Engineering (Invited Speech)	2022	Akira Nishimura

10	Effetive Utilization of Wide Wavelength of Light Composing Sunlight to Promote CO_2 Photocatalytic Reduction Performance	2nd Global Virtual Summit on Catalyst & Chemical Engineering	Abstract Book of 2nd Global Vertual Summit on Catalysts & Chemical Engineering (Invited Speech)	2022	Akira Nishimura
11	Feasibility Study on Energy Supply Chain Combinin Renewable Energy and Hydrogen	RENEWABLE MEET2022	No Proceedings (Keynote Speech)	2022	Akira Nishimura
12	Impact of Through-plane Separator Shape on Heat and Mass Transfer Phenomena in Single Cell of PEFC Operatad at Higher Temperature than Usual	6th Edition of Applied Science, Engineering and Technology Virtual	No Proceedings (Keynote Speech)	2022	Akira Nishimura
13	Investigation on Optimum Components Thickness of PEFC under Higher Temperature Operation than Usual	International Meet on Power and Energy Engineering	Abstract of International Meet on Power and Energy Engineering (Keynote Speech)	2022	Akira Nishimura

14	Analysis on Temperature Distribution in Single Cell of PEFC Operated at 373 K Simulated by Heat Transfer Model Considering Vapor Transfer	4th Global Webinar on Applied Science, Engineering and Technology	Abstract Book of 4th Global Webinar on Applied Science, Engineering and Technology (Keynote Speech)	2022	Akira Nishimura
15	Impact of Black Body Material Enhancing Gas Movement on CO_2 Reduction Performance of TiO_2 Photocatalyst	2nd Edition of Catalysis, Chemmical Engineering and Technology Virtual	No Proceedings (Keynote Speech)	2022	Akira Nishimura
16	Absorption from Ultraviolet to Infrared Light for Promotion of CO_2 Reduction with P_4O_{10}/TiO_2	CATALYSIS MEET2022	No Proceedings (Keynote Speech)	2022	Akira Nishimura
17	Optimization of Operation Condition for Membrane Reactor to Produce Hydrogen from Biogas Dry Reforming	5th Global Webinar on Applied Science, Engineering and Technology	Abstract Book of 5th Global Webinar on Applied Science, Engineering and Technology (Keynote Speech)	2022	Akira Nishimura

18	Mass Transfer Promotion by Black Body Material to Improve the CO_2 Reduction Performance of TiO_2 Photocatalyst	10th International Conference on Catalysis and Chemical Engineering	No Proceedings (Invited Speech)	2022	Akira Nishimura
19	Assessment on Energy Efficiency and CO_2 Emission Inhibition Effect of Renewable Hydrogen Supply Chain	2nd International Meet on Renewable and Sustainable Energy	Proceedings of 2nd International Meet on Renewable and Sustainable Energy (Keynote Speech)	2023	Akira Nishimura
20	Numerical Simulation on Effect of Separator Thickness on Coupling Phenomena in Single Cell of PEFC under Higher Temperature Operation Condition	Power and Energy Engineering Virtual	No Proceedings (Keynote Speech)	2023	Akira Nishimura
21	Mass Transfer Promotion by Black Body Material to Improve the CO_2 Reduction Performance of P_4O_{10}/TiO_2 Photocatalyst with NH_3	3rd Edition of Catalysis, Chemical Engineering and Technology Virtual	No Proceedings (Keynote Speech)	2023	Akira Nishimura
22	Feasibility Study on Energy Supply Chain of Green Hydrogen Utilizing LNG Cold Heat	Global Experts Conference on Renewable and Sustainable Energy (GECRSE-23)	No Proceedings (Invited Speech)	2023	Akira Nishimura

23	Approach to Improve the Performance of Membrane Reactor to Produce Hydrogen From Biogas Dry Refiorming	International Summit on Non-Renewable and Renewable Energy (ISNRE2023)	No Proceedings (Plenary Speech)	2023	Akira Nishimura
24	System Design and Evaluation on Membrane Reactor to Produce Hydrogen via Biogas Dry Reforming	International Conference on Renewable and Sustainable Energy (RENEWABLEENG-2023)	No Proceedings (Invited Speech)	2023	Akira Nishimura
25	Numerical Analysis on Temperature Disribution in a Single Cell of HT-PEFC – Validation of 1D Heat Transer Model by 3D Multi-physics Simulation Model –	Global Congress on Renewable and Sustainable Energy (GCRSE-23)	No Proceedings (Pleanary Speech)	2023	Akira Nishimura
26	Investigation on Performance of Membrane Reactor to Produce Hydrogen from Biogas Dry Reforming Using Ni or Ni/Cr Catalyst	RENEWABLEMEET2024	No Proceedings (Kyenote Speech)	2024	Akira Nishimura

〔IV〕総説

(1) 光触媒による CO_2 の改質・資源化，機械の研究，西村顕，Vol.64，No.12，1001-1009，2012.

(2) 風力発電と太陽光発電を組み合わせた発電システム設置ビルモデルの最適設計，ケミカルエンジニヤリング，西村顕，Vol.59，No.11，24-34，2014.

(3) 燃料電池，化学工学，西村顕，Vol.82，No.10，592-593，2018.

(4) 脱炭素社会実現に向けた再エネ積極導入のための街づくり，日刊工業新聞第 2 部地球環境特集，2022 年 2 月 10 日掲載，西村顕.

(5) 研究室紹介「三重大学工学部総合工学科機械工学コース熱エネルギーシステム研究室」，冷凍，廣田真史，丸山直樹，西村顕，Vol.5，No.97，1132，2022.

〔V〕著書

(1) Proceedings of The 10th Tri-University International Joint Seminar & Symposium 2003, Edited by N. Ito, S. Kato, H. Ehara, Y. Morio, A. Nishimura, Y. Suzuki and N. Maruyama, Published by Mie University, Printed by Mie University Cooperative Society, 2003.

(2) 産学連携「中核人材育成プログラム実証講座」第二講座テキスト　事例に学ぶVIII熱・流体力学，西村顕，熱・流体力学（熱流体輸送現象III，pp.83-114 を担当），三重大学工学部機械工学科編集，三重大学出版会発行，2007.

(3) 最新伝熱計測ハンドブック，西村顕，7.5 圧力測定，7.8 流量・流速の測定を担当，株式会社テクノシステム編集・発行，2011.

(4) Planet Earth 2011 – Global Warming Challenges and Opportunities for Policy and Practice, Akira Nishimura and Eric Hu, Chapter 17. Reforming CO_2 into Fuel Using a TiO_2 Photocatalyst Membrane Reactor を担当, In Tech – Open Access Publisher 発行, 2011.

(5) Thermal Power Plants, Eric Hu, Yongping Yang and Akira Nishimura, Chapter 1. Solar Aided Power Generation: Generating “Green” Power from Conventional Fossil Fuelled Power Stations を担当, Mohammad Rasul 編集, InTech 発行, 2012.

(6) 新編化学工学，西村顕，1.1 単位と次元，1.2 熱力学を担当，共立出版編集・発行，2012.

(7) Photo-Electrochemistry & Photo-Biology for the Sustainability, Akira Nishimura and Eric Hu, Chapter 9. New Development in CO_2 Reforming Technology: Using TiO_2 Photocatalyst Film を担当, S. Kaneco, B. Viswanathan and H. Katsumata 編集, Union Press 発行, 2012.

(8) Global Warming – Causes, Impacts and Remedies, Akira Nishimura and Mohan Kolhe, Chapter 7: A Study on Assessment of Power Output by Integrating Wind Turbine and Photovoltaic Energy Source with Futuristic Smart Buildings を担当, Bharat Raj Singh 編集, InTech 発行, 2015.

(9) Carbon Dioxide Chemistry, Capture and Oil Recovery, Akira Nishimura, Chapter 4: Effect of Overlapping Fe/TiO_2 Coated on Netlike Glass Disc and Cu Disc on CO_2 Reduction を担当, Iyad Karame, Janah Shaya and Hassan Stour 編集, InTech 発行, 2018.

(10) 最近の化学工学 67「進化する燃料電池・二次電池－反応・構造・製造技術の基礎と未来社会を支える電池技術－」，西村顕，2-2　伝熱を担当，化学工学会関東支部編集・発行，三恵社出版，2019.

(11) Smart Technologies for Energy, Environment and Sustainable Development – Select Proceedings of ICSTEESD 2018, Akira Nishimura, Energy Assessment on Double Power Generation System of Building Integrated Photovoltaic and Fuel Cell を担当, Mohan Kolhe, Pawan Kumar Labhasetwar, H. M. Suryawanshi 編集, Springer 発行, 2019.

(12) Top 10 Contributions in Chemical Engineering, Akira Nishimura, Go Mitsui, Masafumi Hirota and Eric Hu, CO_2 Reforming Performance and Visible Light Responsibility of Cr-Doped TiO_2 Prepared by Sol-Gel and Dip-Coating Method を担当，Avid Science 発行, 2019.

(13) Prime Archives in Melecular Sciences, Akira Nishimura, Tadaaki Inoe, Yoshito Sakakibara, Masafumi Hirota, Akira Koshio and Eric Hu, Impact of Pd Loading on CO_2 Reduction

Performance over Pd/TiO_2 with H_2 and H_2O を担当, Vide Leaf 発行，2020.

(14) Photochemistry and Photophysics – Recent Advances, Akira Nishimura, CO_2 Reduction Characcteristics of Cu/TiO_2 with Various Reductants を担当, InTech Open 発行, 2020.

〔VI〕新聞記事

1. 日刊工業新聞第 2 部地球環境特集，2022 年 2 月 10 日掲載，「脱炭素社会実現に向けた再エネ積極導入のための街づくり」，西村顕

〔VII〕特許

1. 特許第 5885103 号，発明の名称：風力発電と太陽光発電の 2 種類の発電手段で構成される発電システムの発電評価システム，発明者：西村顕，鎌田泰成，安藤俊剛，村田淳介

本特許の概要として請求事項および技術分野を以下に抜粋する.

【特許請求の範囲】

【請求項 1】

1以上のビルと，当該ビルが配置される敷地と，該敷地内に配置される風力発電手段と太陽光発電手段の2種類の発電手段とからなる複合発電手段と,該複合発電手段についての発電評価指数を算出する発電指数算出手段と，電力消費形態データベースから構成される発電評価システムであって，前記発電指数算出手段が，気象条件と，施設条件と，電力消費形態に基づいて前記複合発電手段について1以上の発電評価指数を算出し,前記気象条件が時間的に変動する風速,風向，日射時間帯，日射強度，気温を含み，前記施設条件がビルサイズ，ビル棟数，ビル配置，敷地面積を含み，前記2種類の発電手段の何れか一方の発電手段に設定される規制条件が，他方の発電手段に設定される前記規制条件を規制し，前記規制条件が少なくとも太陽光パネルの表面温度，太陽光パネル表面の風速（風力），ビルサイズ，ビル棟数，ビル配置，敷地面積であることを特徴とする発電評価システム.

【請求項２】

前記発電評価指数算出手段が，3次元流体解析ソフトを用い，少なくとも時間変動する気象条件の風速，風向および施設条件のビルサイズ，ビル棟数，ビル配置，敷地面積を考慮した風力発電手段に関する発電評価指数を算出することを特徴とする請求項1に記載の発電評価システム.

【請求項３】

前記発電評価指数算出手段が，前記太陽光発電手段の発電評価指数を算出するに当たり，少なくとも時間変動する太陽光パネルの表面温度，太陽光パネル表面の風速（風力）を考慮した太陽光発電手段に関する発電評価指数を算出することを特徴とする請求項1又は2の何れか1項に記載の発電評価システム.

【請求項４】

前記異なる消費形態に関する電力消費形態データベースと前記発電指数算出手段に基づき算出した発電指数を有する複合発電手段との時間的，季節的変動対応性を評価することを特徴とする請求項1に記載の発電評価システム.

【請求項５】

前記2種類の発電手段の何れか一方の発電手段に設定される前記気象条件と前記施設条件が，

他方の発電手段に設定される前記気象条件と前記施設条件を規制する因子として，太陽光パネルの表面温度，太陽光パネル表面の風速（風力），ビルサイズ，ビル棟数，ビル配置，敷地面積を考慮することを特徴とする請求項1に記載の発電評価システム．

【技術分野】

本発明は，気象条件として時間的に変動する風速，風向，日射時間帯，日射強度，気温を，また施設条件としてビルサイズ，ビル棟数，ビル配置，敷地面積をそれぞれ考慮した風力発電手段と太陽光発電手段の2種類の発電手段とからなる複合発電手段について，異なる消費形態に対応して敷設条件や運転条件を評価できる発電評価システムである．