

# Proton conductors

Fuel cell

Proton-conducting glasses

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| 388 | <p>Anhydrous Proton Conducting Hybrid Membrane Electrolytes for High Temperature (&gt;100°C) Proton Exchange Membrane Fuel Cells<br/>           G. Lakshminarayana, R. Vijayaraghavan, M. Nogami, and I. V. Kitykc<br/>           J. Electrochem. Soc. 158, B376~B383 (2011).</p>  |
| 385 | <p>Novel hybrid proton exchange membrane electrolytes for medium temperature non-humidified fuel cells<br/>           G. Lakshminarayana, M. Nogami and I. V. Kityk<br/>           J. Alloys and Compounds, 509, 2238~2242 (2011)</p>  |
| 382 | <p>Novel ceramic composite membranes for low-temperature fuel cells<br/>           T. Uma and M. Nogami<br/>           J. Non-Cryst. Solids, 356, 2799~2802 (2010).</p>  |
| 374 | <p>Synthesis and characterization of anhydrous proton conducting inorganic–organic composite membranes for medium temperature proton exchange membrane fuel cells (PEMFCs)<br/>           G. Lakshminarayana, M. Nogami, and I. V. Kityk<br/>           Energy, 35, 5260~5268 (2010).</p>  |
| 373 | <p>Preparation and characterization of proton conducting phosphosilicate glass membranes with different catalyst layers for low-temperature H<sub>2</sub>/O<sub>2</sub> fuel cells<br/>           K. Tanaka, G. Lakshminarayana, R. Jalem, and M. Nogami<br/>           J. Alloys and Compounds 506, 902~912 (2010).</p>   |
| 364 | <p>Proton conducting organic–inorganic composite membranes under anhydrous conditions synthesized from tetraethoxysilane/methyltriethoxysilane/trimethyl phosphate and 1-butyl-3 methylimidazolium tetrafluoroborate<br/>           G. Lakshminarayana and M. Nogami<br/>           Solid State Ionics, 181, 760~766 (2010).</p>   |
| 362 | <p>Anhydrous proton-conducting organic–inorganic hybrid membranes synthesized from tetramethoxy-silane/methyltrimethoxysilane/diisopropyl phosphate and ionic liquid<br/>           G. Lakshminarayana, V. S. Tripathi, I. Tiwari and M. Nogami<br/>           Ionics, 16, 385~395 (2010).</p>   |
| 361 | <p>Anhydrous Proton Conducting Inorganic–Organic Composite Membranes Based on Tetraethoxysilane/Ethyl-Triethoxysilane/Trimethylphosphate and 1-Butyl-3-methylimidazolium-bis(trifluoromethylsulfonyl)imide<br/>           G. Lakshminarayana, M. Nogami, and I. V. Kitykb<br/>           J. Electrochem. Soc. 157, B892~B899 (2010).</p>   |
| 360 | <p>Synthesis of Porous Single-Crystalline Platinum Nanocubes Composed of Nanoparticles<br/>           M. Nogami, R. Koike, R. Jalem, G. Kawamura,.Y. Yang, and Y. Sasaki<br/>           J. Phys. Chem. Lett. 1, 568~571 (2010).</p>  |
| 357 | <p>Inorganic–Organic Hybrid Membranes with Anhydrous Proton Conduction Prepared from tetramethoxysilane/ methyl-trimethoxysilane /trimethylphosphate and 1-ethyl-3 methylimidazolium-bis (trifluoromethanesulfonyl) imide for H<sub>2</sub>/O<sub>2</sub> Fuel Cells<br/>           G. Lakshminarayana and M. Nogami<br/>           Electrochimica Acta, 55, 1160~1168 (2010).</p> |

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| 356 | <p>Synthesis and characterization of proton conducting inorganic-organic hybrid nanocomposite films from mixed phosphotungstic acid/phosphomolybdic acid/tetramethoxysilane/3-glycidoxypropyl-trimethoxysilane/phosphoric acid for H<sub>2</sub>/O<sub>2</sub> fuel cells<br/> G. Lakshminarayana and M. Nogami<br/> J. Renewable Sustainable Energy 1, 063106 (2009)</p> |
| 355 | <p>Synthesis, characterization and electrochemical properties of SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>-TiO<sub>2</sub>-ZrO<sub>2</sub> glass membranes as proton conducting electrolyte for low-temperature H<sub>2</sub>/O<sub>2</sub> fuel cells.<br/> G. Lakshminarayana and M. Nogami<br/> J. Phys. D: Appl. Phys. 42. 215501/1~215501/11 (2009).</p>            |
| 354 | <p>Preparation and Characterisation of Pelletised Glass Electrolytes for Fuel Cells<br/> M. Nogami, K. Tanaka, and T. Uma,<br/> Fuel Cells, 9, 528~533 (2009).</p>  |
| 353 | <p>Gas sensor with excellent selectivity to hydrogen gas<br/> M. Nogami and T. Maeda<br/> Sensors and Actuators B: Chemical, 142, 7~10 (2009).</p>  |
| 351 | <p>Synthesis and Characterization of Proton Conducting Inorganic-Organic Hybrid Nanocomposite Membranes Based on mixed PWA-PMA-TEOS-GPTMS-H<sub>3</sub>PO<sub>4</sub>-APTES for H<sub>2</sub>/O<sub>2</sub> Fuel Cells.<br/> G. Lakshminarayana and M. Nogami<br/> J. Phys. Chem. C, 113, 14540~14550 (2009).</p>   |
| 348 | <p>Synthesis and characterization of proton conducting Inorganic-Organic hybrid nanocomposite membranes based on Tetraethoxysilane/Trimethylphosphate/3-glycidoxypropyl trimethoxysilane/Heteropoly Acids<br/> G. Lakshminarayana and M. Nogami<br/> Electrochimica Acta, 54, 4731~4740 (2009).</p>   |
| 347 | <p>The preparation and characterization of TiO<sub>2</sub>/ZrO<sub>2</sub> composites doped with PMA/PWA.<br/> T. Uma and M. Nogami<br/> J. Ceram. Soc. Japan, 117, 411~414 (2009).</p>   |
| 346 | <p>PMA/ZrO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub> glass composite membranes: H<sub>2</sub>/O<sub>2</sub> fuel cells<br/> T. Uma and M. Nogami<br/> J. Membrane Sci. 334, 123~128 (2009).</p>  |
| 343 | <p>A methanol gas sensor based on inorganic glass thin films<br/> M. Nogami, T. Maeda, and T. Uma<br/> Sensors and Actuators B: Chemical, 137, 603~607 (2009).</p>  |
| 339 | <p>Performance of H<sub>2</sub>/O<sub>2</sub> fuel cell using membrane electrolyte of phosphotungstic acid-modified 3-glycidoxypropyl-trimethoxysilanes<br/> T. Inoue, T. Uma, and M. Nogami<br/> J. Membrane Sci. 323, 148~152 (2008).</p>   |
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| 334 | <p>Synthesis and proton conductivity of large-sized crack-free mesostructured phosphorus-oxide-doped silica monoliths<br/> L. Xiong, Y. Yang, J. Shi and M. Nogami<br/> Microporous and Mesoporous Materials, 111, 343~349 (2008).</p>  |

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| 299 | <p>High performance of H<sub>2</sub>/O<sub>2</sub> fuel cells using Pt/C electrodes and P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub>-PMW glasses as electrolyte in low temperature<br/> T. Uma and M. Nogami<br/> J. Ceram. Soc. Japan, 114, 748~753 (2006).</p>                    |
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| 286 | <p>Development of H<sub>2</sub>/O<sub>2</sub> fuel cell based on proton conducting P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub>-PMA glasses as electrolyte<br/> T. Uma and T. Nogami<br/> Adv. Mater. Res. 11-12, 149~152 (2006).</p>   |
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