

## Publications

### Editor of Special Issues

1. V.V. Guliants, U.S. Ozkan, A. Gaffney, Editors, Preface. *Catalysis Today*, 81(2), 75, 2003.
2. V.V. Guliants, Editor. Current Developments in Combinatorial Heterogeneous Catalysis. In: *Catalysis Today*, 67, 2001, 100 pp.
3. V.V. Guliants, Preface. *Catalysis Today*, 67, 2001, 307.

### 1.1.1. Journal Summary List (Institute for Scientific Information Data for 2001)

Title	Total Cites	Impact Factor	Immediacy Index	2001 Articles	Cited Half-Life, yrs
<i>AIChE Journal</i>	10767	1.793	0.193	259	>10.0
<i>Applied Catalysis A</i>	6152	2.258	0.254	548	4.4
<i>Catalysis Letters</i>	4768	1.852	0.139	274	5.3
<i>Catalysis Today</i>	5868	2.333	0.183	323	4.4
<i>Chemical Communications</i>	42784	3.902	0.742	1265	5.9
<i>Chemistry of Materials</i>	14906	3.690	0.432	671	4.3
<i>Chromatographia</i>	3847	1.317	0.271	314	6.3
<i>Journal of Catalysis</i>	18440	3.293	0.430	342	8.5
<i>J. Materials Science Letters</i>	4059	0.489	0.034	585	7.0
<i>Journal of Membrane Science</i>	7218	1.706	0.322	317	6.2
<i>Journal of Molecular Catalysis A</i>	3658	1.520	0.309	363	3.6
<i>Micropor. Mesopor. Materials</i>	1899	2.497	0.223	314	2.5
<i>Studies in Surf. Sci. and Catalysis</i>	4518	1.265	2.217	23	5.9
<i>Thin Solid Films</i>	15046	1.266	0.156	1069	5.7

### 1.1.2. Peer-Reviewed Publications Published in Refereed Journals

*The highest impact publications based on the Science Citation Index data are identified by \*'s.*

*Each peer-reviewed publication cited an average 12.7 times*

1. M.A. Carreon, V.V. Guliants, M.O. Guerrero-Perez, M.A. Banares, "Phase Transformations in Mesostructured VPO/Surfactant Composites". *Microporous and Mesoporous Materials*, 71(1-3), 57-63, 2004.
2. S. Kim, J. Ida, Y.S. Lin and V.V. Guliants, "Ordered Mesoporous Silica Membranes for CO<sub>2</sub> Separation from Flue Gas", *International Journal of Environmental Technology and Management*, 4(1/2), 21-31, 2004.
3. E.M. Kopaygorodsky, V.V. Guliants, W.B. Krantz, "Predictive Dynamic Model of Single-Stage Ultra-Rapid Pressure Swing Adsorption". *AIChE Journal*, 50(5), 953-962, 2004.
4. V.V. Guliants, M.A. Carreon and Y.S. Lin, Invited Review: "Ordered Mesoporous and Macroporous Inorganic Films and Membranes". *Journal of Membrane Science*, 235(1-2), 53-72, 2004.
5. M.O. Guerrero-Perez, J.N. Al-Saedi, V.V. Guliants, M. Banares, "Catalytic Properties of Mixed Mo-V-Sb-Nb-O Oxide Catalysts for the Ammoxidation of Propane to Acrylonitrile". *Applied Catalysis, A: General*, 260(1), 93-99, 2004.

6. M.A. Carreon, V.V. Guliants, F. Pierelli, and F. Cavani, "Ordered Mesostructured Mixed Metal Oxides: Microporous VPO Phases for *n*-Butane Oxidation to Maleic Anhydride". *Catalysis Letters*, 92(1-2), 11-16, 2004.
7. J.N. Al-Saeedi, V.V. Guliants, V.K. Vasudevan, "Model Bulk Mo-V-Te-O Catalysts for Selective Oxidation of Propane to Acrylic Acid". *Catalysis Communications*, 4(10), 537-542, 2003.
8. J.N. Al-Saeedi, V.V. Guliants, O. Guerrero, and M.A. Bañares, "Bulk Structure and Catalytic Properties of Mixed Mo-V-Sb-Nb Oxides for Selective Propane Oxidation to Acrylic Acid". *Journal of Catalysis*, 215(1), 108-115, 2003
9. M.A. Carreon and V.V. Guliants, "Mesostructured Vanadium-Phosphorus-Oxide Phases", *Microporous and Mesoporous Materials*, 55(3), 297-304, 2002.
10. J.N. Al-Saeedi and V.V. Guliants, "High-Throughput Experimentation in Multicomponent Bulk Mixed Metal Oxides: Mo-V-Sb-Nb-O System for Selective Oxidation of Propane to Acrylic Acid", *Applied Catalysis A*, 237(1-2), 111-120, 2002.
11. M.A. Carreon and V.V. Guliants, "Macroporous Vanadium Phosphorus Oxide Phases Displaying Three-Dimensional Arrays of Spherical Voids", *Chemistry of Materials*, 14(6), 2670-75, 2002.
12. V.V. Guliants, S. A. Holmes, "Probing Polyfunctional Nature of Vanadyl Pyrophosphate Catalysts: Oxidation of 16 C<sub>4</sub> Molecules". *Journal of Molecular Catalysis A: Chemical*, 175, 227-239, 2001.
13. M.A. Carreon, V.V. Guliants, "Hierarchical Design of Mixed Metal Oxides: Novel Macroporous VPO Phases". *Chemical Communications*, 16, 1438-1439, 2001.
14. S.A. Holmes, J. Al-Saeedi, V.V. Guliants, P. Boolchand, and D. Georgiev, "Solid State Chemistry of Bulk Mixed Metal Oxide Catalysts for the Selective Oxidation of Propane to Acrylic Acid". *Catalysis Today*, 67, 403-409, 2001, **cited 14 times**.
15. V. V. Guliants, S. A. Holmes, J. B. Benziger, P. Heaney, D. Yates, and I. E. Wachs, "*In Situ* Studies of Atomic, Nano- and Macroscale Order During VOHPO<sub>4</sub>·0.5H<sub>2</sub>O Transformation to (VO)<sub>2</sub>P<sub>2</sub>O<sub>7</sub>". *Journal of Molecular Catalysis A*, 172, 265-276, 2001, **cited 10 times**.
16. E.A. Guliants, W.A. Anderson, L.P. Guo, V.V. Guliants, "Transmission Electron Microscopy Study of Ni Silicides Formed During Metal-Induced Silicon Growth". *Thin Solid Films*, 385, 74-80, 2001.
17. V.V. Guliants, J.B. Benziger, S. Sundaresan, I.E. Wachs, and A.M. Hirt, "Effect of Promoters for *n*-Butane Oxidation to Maleic Anhydride over Vanadium-Phosphorus-Oxide Catalysts: Comparison with Supported Vanadia Catalysts". *Catalysis Letters*, 62, 87-91, 1999.
18. \*V.V. Guliants, Review Article, "Molecular Structure-Property Relationships in Oxidation of C<sub>4</sub> Hydrocarbons on Supported Metal Oxide Catalysts". *Catalysis Today*, 51, 255-268, 1999, **cited 16 times**.
19. V.V. Guliants, J.T. Mullhaupt, J.M. Newsam, A.M. Gorman, C.M. Freeman, "Predicting Locations of Non-Framework Species in Zeolites". *Catalysis Today*, 50, 661-668, 1999, **cited 9 times**.

20. \*I.E. Wachs, J.M. Jehng, G. Deo, B.M. Weckhuysen, V.V. Guliants, J.B. Benziger, and S. Sundaresan, "Fundamental Studies of Butane Oxidation over Model-Supported Vanadium Oxide Catalysts: Molecular Structure-Reactivity Relationships". *Journal of Catalysis*, 170, 75-88, 1997, **cited 35 times**.
21. J.B. Benziger, V.V. Guliants, and S. Sundaresan, I.E. Wachs, "New Precursors to Vanadium Phosphorus Oxide Catalysts". *Catalysis Today*, 33, 49-56, 1997, **cited 8 times**.
22. I.E. Wachs, J.-M. Jehng, B.M. Weckhuysen, V.V. Guliants, J.B. Benziger, "In Situ Raman Spectroscopy of Bulk and Surface Metal Oxide Phases During Oxidation Reactions". *Catalysis Today*, 32, 47-55, 1996, **cited 35 times**.
23. \*V.V. Guliants, J.B. Benziger, S. Sundaresan, I.E. Wachs, J.-M. Jehng, J.E. Roberts, "The Effect of the Phase Composition of Model V-P-O Catalysts for Partial Oxidation of *n*-Butane". *Catalysis Today*, 28, 275-295, 1996, **cited 68 times**.
24. \*V.V. Guliants, J.B. Benziger, S. Sundaresan, I.E. Wachs, N. Yao, "Evolution of the Active Surface of the Vanadyl Pyrophosphate Catalysts". *Catalysis Letters*, 32, 379-386, 1995, **cited 31 times**.
25. V.V. Guliants, J.B. Benziger, S. Sundaresan, I.E. Wachs, "Vanadyl(IV) Phosphonates,  $\text{VOc}_n\text{H}_{2n+1}\text{PO}_3 \cdot x\text{H}_2\text{O}$  ( $n=0-4$ ,  $x=1$  or  $1.5$ ), as Precursors of Vanadyl(IV) Pyrophosphate". *Chemistry of Materials*, 7, 1493-1498, 1995, **cited 17 times**.
26. V.V. Guliants, J.B. Benziger, S. Sundaresan, "Synthesis and Characterization of Vanadyl Phosphite,  $\text{V}^{\text{IV}}\text{OP}^{\text{III}}\text{O}_3 \cdot 1.5\text{H}_2\text{O}$ ". *Chemistry of Materials*, 7, 1485-1492, 1995, **cited 11 times**.
27. V.V. Guliants, J.B. Benziger, and S. Sundaresan, "New Layered Vanadyl(IV) Phosphite as a Precursor to Vanadyl Pyrophosphate Catalysts for Partial Oxidation of *n*-Butane to Maleic Anhydride". *Journal of Catalysis*, 156, 298-300, 1995.
28. \*V.V. Guliants, J.B. Benziger, S. Sundaresan, "Intercalation of Aliphatic Amines into the Layered Structure of Vanadyl (IV) Hydrogen Phosphate Hemihydrate  $\text{VOHPO}_4 \cdot 0.5\text{H}_2\text{O}$ ". *Chemistry of Materials*, 6, 353-356, 1994, **cited 19 times**.
29. V.S. Parbuzin and V.V. Guliants, "Dihydrogen Carrier Gases in Gas-Solid Chromatography – Study of Hydrogen Weight and Nuclear-Spin Isomer Adsorption". *Chromatographia*, 30, 283-286, 1990.
30. V.S. Parbuzin, V.V. Guliants, D.E. Bezlepkin, Y.N. Barinov, Y.G. Morozov, and Y.A. Leshchev, "Catalytic Properties of Superconducting  $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$  Ceramics in Reactions of Low-Temperature Para-Ortho Conversion and Hydrogen-Deuterium Equilibration of Molecular Hydrogen". *Journal of Materials Science Letters*, 9, 703-705, 1990.
31. V.S. Parbuzin, V.V. Guliants, and D.E. Bezlepkin, "Catalytic Activity of  $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$  Superconducting Ceramics in Low Temperature Para- Ortho- Conversion and H-D-Equilibration of Molecular Hydrogen". *Superconductivity: Physics, Chemistry, Engineering*, 2, 159-162, 1989.
32. V.S. Parbuzin, V.V. Guliants, and D.E. Bezlepkin, "Catalytic Activity of  $\text{YBaCuO}$  Superconducting Ceramics in H-D-Equilibration of Molecular Hydrogen". *Russian Journal of Physical Chemistry*, 63, 3135-3137, 1989.