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MARTIN MARIETTA

Conservation and Renewable Energy Program

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1991 Edition

K. H. Vaughan

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CONSERVATION AND RENEWABLE ENERGY PROGRAM

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1991 Edition

Kathi H. Vaughan

Date Published—May 1991

Prepared by the
Oak Ridge National Laboratory
Oak Ridge, Tennessee 37831
managed by
MARTIN MARIETTA ENERGY SYSTEMS, INC.
for the
U.S. DEPARTMENT OF ENERGY
under contract DE-AC05-84OR21400

CONTENTS

Preface v
Analysis and Evaluation 1
Building Equipment Research 13
Building Thermal Envelope Systems and Materials 23
District Heating 35
Residential and Commercial Conservation Program 37
Weatherization Assistance Program 39
Existing Buildings Research Program 41
Ceramic Technology for Advanced Heat Engines 47
Alternative Fuels and Propulsion Technology 69
Microemulsion Fuels 79
Industrial Chemical Heat Pumps 81
Materials for Advanced Industrial Heat Exchangers 83
Advanced Industrial Materials 85
Tribology 93
Energy-Related Inventions Program 99
Electric Energy Systems 101
Superconductivity for Electric Energy Systems 113
Thermal Energy Storage 115
Biofuels Feedstock Development 121
Biotechnology 139
Solar Technology 143
Continuous Chromatography in Multicomponent Separations 145
Author Index 147
Distribution 159

PREFACE

This bibliography lists reports and selected papers published under the Oak Ridge National Laboratory Conservation and Renewable Energy Program from 1986 through February 1991. Information on documents published prior to 1986 can be obtained from Kathi Vaughan at the address or telephone number given below.

Most of the documents in the bibliography are available from Oak Ridge National Laboratory. Single copies may be requested by contacting Kathi Vaughan. Items may also be purchased from the National Technical Information Service (address below), or obtained directly from the publisher, libraries, or other information service.

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D. M. Dillard. Georgia Institute of Technology, Atlanta, Ga.

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D. A. Koester, R. F. Davis. North Carolina State University, Raleigh, N.C.

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G. E. Schaefer. W. R. Grace Company, Cambridge, Mass.
A. L. Dragoo, S. M. Hsu. National Institute of Standards and Technology, Gaithersburg, Md.
D. R. Johnson. Oak Ridge National Laboratory, Oak Ridge, Tenn.
H. Hausner. Technical University of Berlin, Berlin, FRG.
R. Pompe. Swedish Institute for Silicate Research, Goeteborg, Sweden

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K. R. Karasek, S. A. Bradley. Allied-Signal Engineered Materials Research Center, Des Plaines, Ill.

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J. L. Ackerman. Massachusetts General Hospital, Boston, Mass.
H. C. Yeh, J. P. Pollinger. Allied-Signal Aerospace Co., Torrance, Calif.

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J. Sankar, A. Kelkar, A. Sinha. North Carolina A&T State University, Greensboro, N.C.
K. C. Liu. Oak Ridge National Laboratory, Oak Ridge, Tenn.

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H. Mizuhara. Wesgo Div., GTE Products Corp., Belmont, Calif.
K. S. Kim. University of Illinois, Urbana, Ill.

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T. Hine. University of Illinois Urbana-Champaign, Urbana, Ill.

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ALTERNATIVE FUELS AND PROPULSION TECHNOLOGY

442 ***Results from the Third Year of Operation of the Federal Methanol Fleet at Argonne National Laboratory***
ORNL/TM-11736 (January 1991)

B. H. West, R. N. McGill. Oak Ridge National Laboratory, Oak Ridge, Tenn.
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B. H. West, A. L. Compere, W. L. Griffith. Oak Ridge National Laboratory, Oak Ridge, Tenn.

444 ***"Interpretation of Engine Cycle-to-Cycle Variation by Chaotic Time Series Analysis"***
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C. S. Daw, W. K. Kahl. Oak Ridge National Laboratory, Oak Ridge, Tenn. (Warrendale, Pa.: Society of Automotive Engineers, Inc., April 1990)

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S. L. Hillis. University of Tennessee, Knoxville, Tenn.

446 ***Results from the Fourth Year of Operation of the Federal Methanol Fleet at Lawrence Berkeley Laboratory***
ORNL/TM-11590 (August 1990)

B. H. West, R. N. McGill. Oak Ridge National Laboratory, Oak Ridge, Tenn.
S. L. Hillis. University of Tennessee, Knoxville, Tenn.

447 ***Heavy Duty Liquid and Gaseous Fuel Emissions Database Test Results from Four Alternative Fuel Configurations of the Caterpillar 3406 Engine***
ORNL/Sub/86-SB195/1 (June 1990)

D. J. Waldman. Caterpillar, Inc., Technical Center, Peoria, Ill.

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452 ***"Photographic Visualization of the Ignition of Methanol in a Compression Ignition Engine"***
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D. L. Abata. Michigan Technological University, Houghton, Mich.

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C. S. Reddy. Union College, Schenectady, N.Y.
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455 ***Chemical Effect of Fuel Composition Changes on Emissions from a DI Diesel Engine. Final Report***
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T. A. Litzinger. The Pennsylvania State University, University Park, Pa.

456 ***Results from the Third Year of Operation of the Federal Methanol Fleet at Lawrence Berkeley Laboratory***
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R. N. McGill, B. H. West. Oak Ridge National Laboratory, Oak Ridge, Tenn.
S. L. Hillis, J. W. Hodgson. University of Tennessee, Knoxville, Tenn.

457 ***"Abnormal Combustion in a Methanol Fueled Engine"***
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M. R. Swain, J. A. Blanco, M. N. Swain. University of Miami, Coral Gables, Fla.

458 ***"Effects of Fuel/Air Mixture Preparation on Fuel Nitrogen Conversion in a Spark Ignition Engine"***
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J. H. Hodgson. University of Tennessee, Knoxville, Tenn.
R. N. McGill. Oak Ridge National Laboratory, Oak Ridge, Tenn.

459 ***"The Effect of Hydro Treatment of Coal-Derived Synthetic Fuels on DI Diesel Emissions and Performance"***
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J. H. Palumbo, T. A. Litzinger. Pennsylvania State University, University Park, Pa.

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N. R. Sefer, J. Erwin. Southwest Research Institute, San Antonio, Texas

461 ***"The Effect of Aromatics and Cycloparaffins on DI Diesel Emissions"***
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C. T. Flanigan, T. A. Litzinger. Pennsylvania State University, University Park, Pa.
R. L. Graves. Oak Ridge National Laboratory, Oak Ridge, Tenn.

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W. K. Kahl. Oak Ridge National Laboratory, Oak Ridge, Tenn.

463 ***Results from the Second Year of Operation of the Federal Methanol Fleet at Argonne National Laboratory***
ORNL/TM-11230 (August 1989)

R. N. McGill, B. H. West. Oak Ridge National Laboratory, Oak Ridge, Tenn.
S. L. Hillis, J. W. Hodgson. University of Tennessee, Knoxville, Tenn.

464 ***Results from the First Year of Operation of the Federal Methanol Fleet at Oak Ridge National Laboratory***
ORNL/TM-11229 (July 1989)

R. N. McGill, B. H. West. Oak Ridge National Laboratory, Oak Ridge, Tenn.
S. L. Hillis, J. W. Hodgson. University of Tennessee, Knoxville, Tenn.

465 ***Fuel Nitrogen Conversion in a Spark Ignition Engine—Part II: Effects of Fuel/Air Mixture Preparation***
ORNL/Sub/87-07685/1 (February 1989)

J. W. Hodgson. University of Tennessee, Knoxville, Tenn.

466 ***Analysis of the Combustion of Four Alternate Fuels in a Diesel Engine Using High Speed Photography. Final Report***
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D. L. Abata, D. Masterson. Michigan Technological University, Houghton, Mich.

467 ***Evaluation of the Effects of Natural Gas Contaminants on Corrosion in Compressed Natural Gas Storage Systems—Phase II***
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F. F. Lyle, Jr. Southwest Research Institute, San Antonio, Texas

468 ***"The Department of Energy's Federal Methanol Fleet—A Progress Report"***
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R. N. McGill. Oak Ridge National Laboratory, Oak Ridge, Tenn.
S. L. Hillis. University of Tennessee, Knoxville, Tenn.

469 ***"Effect of Reduced Combustion Chamber Heat Loss on Alternative Fuels Combustion"***
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470 ***"Shale-Derived Diesel Test Fuels for Utilization Studies"***
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J. Erwin, N. R. Sefer. Southwest Research Institute, San Antonio, Texas

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T. W. Ryan III, T. J. Callahan. Southwest Research Institute, San Antonio, Texas

472 ***Results from the First Year of Operation of the Federal Methanol Fleet at Argonne National Laboratory***
ORNL/TM-10816 (October 1988)

R. N. McGill. Oak Ridge National Laboratory, Oak Ridge, Tenn.
S. L. Hillis. University of Tennessee, Knoxville, Tenn.
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C. E. Hunter, P. H. Havstad, I. J. Garwin, E. E. Daby. Ford Motor Co., Dearborn, Mich.

474 ***Fuel Alcohol Formations***
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475 ***Results from the Second Year of Operation of the Federal Methanol Fleet at Lawrence Berkeley Laboratory***
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R. N. McGill. Oak Ridge National Laboratory, Oak Ridge, Tenn.
S. L. Hillis. University of Tennessee, Knoxville, Tenn.

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R. L. Graves. Oak Ridge National Laboratory, Oak Ridge, Tenn.

477 ***An Investigation of High Pressure/Late Cycle Injection of CNG as a Fuel for Rail Applications***
ORNL/Sub/85-22032/1 (April 1988)

J. F. Wakenell, G. G. O'Neal, Q. A. Baker, C. M. Urban. Southwest Research Institute, San Antonio, Texas

478 ***Status of Alcohol Fuels Utilization Technology for Highway Transportation: A 1986 Perspective***
ORNL/Sub/85-22007/4 (February 1988)

R. L. Bechtold. Mueller Associates, Inc., Baltimore, Md.

479 ***A Guide to the Planning and Management of Vehicle Fleet Tests to Obtain Significant Results***
ORNL/Sub/85-22007/2 (February 1988)

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R. L. Bechtold. Mueller Associates, Inc., Baltimore, Md.

481 ***Engine Testing for Synfuel Operation***
ORNL/Sub/85-28609/1 (January 1988)

D. W. Dickey, S. Vinyard, T. J. Callahan, T. W. Ryan III, M. A. Warner-Selph, N. R. Sefer. Southwest Research Institute, San Antonio, Texas

482 ***"First Year Results from the Federal Methanol Fleet at the Lawrence Berkeley Laboratory"***
SAE paper no. 872042, presented at the 1987 SAE International Fuels and Lubricants Meeting and Exposition, November 1987, Toronto, Ontario, Canada

R. N. McGill, J. L. Wantland. Oak Ridge National Laboratory, Oak Ridge, Tenn.
S. L. Hillis. University of Tennessee, Knoxville, Tenn.

483 ***"High-Pressure Late Cycle Direct Injection of Natural Gas in a Rail Medium Speed Diesel Engine"***
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J. F. Wakenell, G. G. O'Neal. Southwest Research Institute, San Antonio, Texas
Q. A. Baker. Wilfred Baker Engineering, San Antonio, Texas

484 ***"The Effect of Alternative Gasolines on Knock and Intake Valve Sticking"***
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M. R. Swain, M. N. Swain, J. A. Blanco, R. R. Adt. University of Miami, Coral Gables, Fla.

485 ***"Fuel Nitrogen Conversion in a Spark Ignition Engine"***
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AUTHOR INDEX

A

Abata, D. L. 452, 466
Abi-Samra, N. C. 726
Ackerman, J. L. 344
Ackermann, R. A. 124, 125, 139, 140, 148
Adams, M. B. 815
Adebiyi, G. A. 763
Adibi, M. M. 651
Adler, H. I. 907
Adt, R. R. 484
Ager, A. 788
Aldrich, T. M. 714
Alexander, D. J. 558
Alexander, K. B. 735, 736
Allard, L. F. 315
Ally, M. R. 526-529, 531-533
Amin, K. E. 340
Amirkhanian, K. R. 234
Anderson-Batiste, G. J. 31
Angelini, P. 327, 361, 385, 396, 642, 643
Anliker, K. S. 846
Appleton, B. R. 642
Arimilli, R. V. 747, 758
Aronson, E. 68
Arthur D. Little, Inc. 164
Aseltine, M. 75, 238
Auld, D. L. 808, 824, 861, 903
Avva, V. S. 377

B

Bair, R. E. 490, 506
Bair, S. 641
Bajer, E. R. 292
Bajpai, R. 908
Baker, Q. A. 477, 483
Baldoni, J. G. 322, 338, 365, 380, 405
Bales, E. L. 201, 209, 248
Barito, M. O. 173
Barito, R. W. 173
Barnes, M. H. 254
Barnes, P. R. . . . 656, 658, 660, 661, 667, 670, 677, 678, 680, 687, 695, 696
Barr, T. L. 569
Bates, C. H. 349
Bates, J. B. 387
Baugh, R. N. 143
Bayer, R. G. 627
Beachley, N. 764
Beal, D. J. 38
Becher, P. F. 315, 327, 331, 361, 385, 389, 396, 400, 406-408, 419, 427, 430, 431, 437, 440, 596, 597
Bechtold, R. L. 478-480, 493
Beck, J. V. 203, 255
Beecher, D. T. 151
Begovich, J. M. 925, 931
Begun, G. M. 308, 352, 363
Bennett, M. R. 761
Bentley, J. 743
Berens, A. P. 305, 309
Bergman, L. B. 655, 668
Bergoust, D. G. 292
Berry, L. G. 14, 27, 33, 89, 259, 260, 262, 263, 297, 647
Besmann, T. M. 578, 588, 604
Bishop, P. S. 543, 565
Blake, T. J. 826, 827, 829, 830, 832
Blakely, K. A. 553
Blalock, T. V. 664
Blanchard, J. P. 706
Blanco, J. A. 457, 484
Blankenhorn, P. R. 797, 803, 843, 862, 863, 899
Blass, J. J. 541
Blau, P. J. 611-613, 615, 617-621, 624-626, 629, 630, 634
Bledsoe, J. L. 230, 297
Bligh, T. 240
Blum, J. B. 366
Boecker, W. D. 333
Boercker, F. D. 283
Boggs, D. 160
Boggs, D. L. 490, 506
Bomar, E. S. 544
Bond, W. D. 396
Bongarten, B. C. 818
Booker, B. L. P. 356
Booker, M. K. 382
Borman, G. L. 490, 506
Bostick, D. A. 169
Boulet, J. A. M. 381

Bowe, T. R. 728
Bowersox, T. W. 797, 803, 807, 843, 862, 863, 899
Bowles, J. P. 710
Bradley, S. 337, 372, 378
Bradt, R. C. 410, 411, 432, 433
Braithwait, S. D. 722
Bransby, D. I. 784, 811, 823
Braunstein, J. 530, 761
Breve, M. A. 786
Brice, C. W., III 721
Bright, J. D. 369, 414
Brinkman, C. R. 308, 320, 352, 358, 363, 376, 418, 438
Broach, R. W. 569
Broadaway, E. R. 682, 722
Broadwater, R. P. 671, 684
Brog, T. K. 441
Bross, J. M. 292
Brown, J. J. 346
Brown, M. A. 4, 7, 9, 17, 21, 23, 30, 40, 42, 45, 49, 56-58, 60, 72, 76, 79, 81, 260, 263, 275, 644–650
Brown, S. R. 770
Brynestad, J. 735, 736, 737, 739-743
Bryson, J. W., Jr. 254
Buckels, L. S. 73
Budai, J. D. 563, 564
Buljan, S.-T. 322, 338, 365, 380, 402, 404, 405
Burgess, D. 791
Burghard, H. C., Jr. 501
Burke, J. C. 165
Burrage, L. M. 704, 712
Busching, H. W. 232, 234
Buzza, T. G. 487
Byerly, R. T. 666
Byers, C. H. 924-933

C

Cagle, S. L. 71
Callahan, T. J. 471, 481
Calvin, M. 836
Canright, G. S. 719
Cantor, R. A. 44
Caponetti, E. 515, 516, 519, 521
Caputo, A. 215
Carbajo, J. J. 775
Carduner, K. R. 421
Carlsmith, R. S. 20
Carlson, M. 788
Carmody, J. 221
Carpenter, H. W. 368
Carpenter, J. A., Jr. 569, 595, 609
Carroll, W. L. 236, 237
Carta, G. 924, 926, 927, 929, 933
Carter, D. G. 292
Carter, R. O., III 421
Cartor, R. A. 63
Cathcart, J. V. 585
Cavin, O. B. 352, 363, 739
Ceder, G. 562
Ceulemans, R. 821, 856
Chandler, W. U. 20
Chandra, D. 757
Chandrasekaran, A. 671, 684
Chang, C. L. 339
Chen, C. F. 422
Chen, F. C. . . 105, 118, 129, 147, 152, 170
Chen, G. 103, 105, 108, 113-115
Chen, N. C. J. 159
Cheng, W. K. 453
Cherney, J. H. 782, 846
Chevacharoenkul, S. 402
Chiappetta, S. 250
Childs, K. W. 173, 184, 219, 220, 226, 251
Childs, P. W. 185, 205
Choi, S.-I. 655, 668
Choudhury, A. 561, 742
Christen, D. K. 563, 564, 737
Christian, J. E. 171, 179, 202, 208, 227, 230, 239
Christopherson, N. S. 789
Christophorou, L. G. 731
Chu, W. 173
Chuang, T. J. 422
Chuck, L. 319
Clark, A., III 882
Clausing, R. E. 615
Clinch, J. M. 148
Clinton, J. 92
Cochran, J. K. 602
Coghlan, W. A. 742
Cole, D. W. 855, 864
Coleman, P. R. 891
Comfort, A. M. 324
Compere, A. L. 443, 513–515, 517–520, 522–524
Consumer Energy Council of America Research Foundation 74
Cooke, C. M. 723
Corbin, N. D. 318, 339, 367, 379

Cordaro, J. F. 672, 683
Courville, G. E. 176, 184, 185, 191, 192, 194, 200, 203-205, 232
Cowles, J. R. 865
Cox, R. L. 535
Creswick, F. A. 112, 121, 128
Cropper, W. P., Jr. 884
Crosbie, G. M. . . 306, 316, 359, 421, 434
Crosswhite, R. N. 101
Crouse, J. C. 726
Crow, T. R. 795, 860
Cuccio, J. S. 324
Cundiff, J. S. 785, 817
Cunningham, M. 815
Curlee, T. R. 546, 570, 571, 587, 593, 605, 610
Curtice, D. H. 728
Curtin, D. T. 847, 866, 897
Cushman, J. H. 776, 794, 796, 814, 842, 867, 898
Cutler, R. A. 369, 414

D

D'Angelo, C. 341
Daby, E. E. 469, 473
Dale, S. J. 556, 685, 694, 723
Dale, V. H. 887
Daniels, W. L. 785, 816
Dapkus, W. D. 728
Darley, J. M. 68
Das, S. 546
David, S. A. 364, 439, 577, 581, 607
Davidson, W. F. 537
Davis, G. D. 396
Davis, R. F. 332, 402
Davis, S. C. 1, 31, 45
Davis, T. D. 790
Davison, B. H. 906-908, 910, 912, 919, 920
Daw, C. S. 444
De Fontaine, D. 562
DeAngelis, D. L. 815
DeBell, D. S. 822, 851, 869, 876
DeCarli, J. P. 924, 927-929
DeGrush, D. 138
Denny, J. C. 485, 491
Deonigi, D. E. 21
Desjarlais, A. O. 175, 214
DeVan, J. H. 525, 583
DeVault, R. C. 100, 104
DeVore, C. E. 612, 617, 620, 621, 629, 634, 638
Dhere, A. G. 739
Diamond, R. C. 282
Dickey, D. W. 481
Dickmann, D. I. 795, 801, 852
Dickson, R. E. 795, 883
DiCola, M. L. 862, 899
Didion, D. A. 99, 144, 157
Diemond, C. C. 710
Diendorfer, G. 652, 653
Dillard, D. M. 330
Dimmel, D. R. 781
Dimpelfeld, P. M. 490
Dinan, T. M. 61, 80
Ding, W. 757
Dinus, R. J. 781
Dippon, D. R. 839, 892
DiStefano, J. R. 543, 565, 583
Dixon, R. K. 877
Dobbins, C. L. 778
Domanski, P. A. 144
Domingo, N. 454
Dougall, D. K. 914
Dougall, R. S. 167
Doverspike, K. 735
Downing, D. J. 288
Doyle, T. W. 796, 810
Dragoo, A. L. 335
Drake, J. B. 751
Dreysse, H. 562
Dripchak, K. 838
Dubbe, D. R. 833, 845
Dufrane, K. F. 314, 342, 384, 409, 420, 424
Dugan, R. C. 692, 705, 712
Dunlap, J. M. 821
Dunn, E. M. 348
Dvorchak, M. 232

E

Eades, R. A. 569
Easterly, C. E. . . 674, 698, 702, 714, 716
Easton, D. S. 719
Eaton, R. A. 710
Eberhardt, J. J. 609
Echenique, P. M. 732, 733
Ecklund, E. E. 512
Eden, A. 291
Ehrenshaft, A. R. 780, 812, 813, 835

Eichler, C. H. 680
Eisenhaure, D. B. 764
Ellingson, W. A. 344
Ellis, D. D. 840
Elmore, J. L. 825
Erickson, D. C. 537
Erwin, J. 460, 470, 486, 503
Eto, J. 19
Evans, D. M. 184
Ewel, K. C. 884

F

Fagan, T. J. 151, 156
Fairchild, P. D. 106
Fang, H. 378
Farlow, G. C. 642
Faulkner, J. S. 576
Fear, M. P. 312, 353
Federer, J. I. . 540, 542, 545, 547-551, 554
Feero, W. E. 666
Feirer, R. P. 781
Felker, P. 859, 875, 879, 880
Fenn, R. C. 850
Ferber, M. K. 315, 321, 323, 370, 406, 407, 417, 428
Fick, G. W. 779
Figliola, A. 821
Fillatti, J. J. 905
Fine, H. A. 119, 172, 173, 592
Fischer, A. T. 590, 743
Fischer, S. ++K. 96, 97, 112, 121, 122, 128
Fisher, J. T. 820
Fitzgerald, K. F. 165
Flanigan, C. T. 461
Flores, F. 733
Floyd, S. D. 71
Folger, A. G. 868
Fortson, N. H. 675, 722, 724
Foster, B. E. 352, 363
Foster, D. E. 490, 497, 502, 506
Foust, J. V. 664
Frank, J. C. 187
Frantzis, L. 165
Frazer, J. W. 569
Frederick, D. J. 849, 882
Freedman, G. M. 167
Freeman, E. 259
Freeman, E. C. 292
Freeman, L. 275
Friggle, W. 650
Fulkerson, W. 106
Fuller, E. R., Jr. 429
Fuller, L. C. 289, 583

G

Gale, M. F. 896
Gao, F. 453
Gardner, R. H. 891
Garver, E. G. 833, 845
Garwin, K. J. 469, 473
Gaydos, P. A. 314, 342
Gazza, G. E. 413
Geller, H. 92
Gellings, C. W. 722
George, E. P. 557, 559
Gettings, M. B. . . 256, 258, 273, 283, 285
Geyer, W. A. 853, 873, 881
Gillette, G. 65, 79
Glaeser, W. A. 384, 409, 420
Glavincevski, B. 486
Glicksman, L. R. . 189, 197, 212, 243, 250
Glumac, E. L. 879, 880
Gnadt, P. A. 669, 710
Godia, F. 907
Goel, R. K. 4, 647
Goeltz, R. T. 66, 70, 82, 84, 86, 87
Goins, L. F. 183
Goldenberg, D. 299
Goldman, C. 10, 36, 37
Gonos, J. 275
Goodrich, S. 305, 309, 319
Googin, J. M. 520, 523
Grado, S. C. 797, 803, 843, 863, 899
Grant, D. 305, 309
Gras Marti, A. 732
Graves, G. A. 305, 309
Graves, R. L. . . . 308, 352, 363, 449, 454, 461, 476, 489, 494, 499, 509, 510
Graves, R. S. 161, 177, 178, 180, 182, 195, 198, 199, 233, 242, 252, 329, 373, 387, 401
Greenbaum, E. 921
Greene, D. K. 782
Greene, D. L. 48, 85, 509
Greer, M. E. 753
Gregory, E. W. 509
Griffin, F. P. 117, 159
Griffin, G. D. 674, 698, 701, 702, 716
Griffioen, J. A. 641
Griffith, W. 143

Griffith, W. L. 443, 513–515, 517–520, 522–524
Griggs, E. I. 188, 194, 222
Grodzka, P. G. 770
Groeger, J. H. 694
Grossman, G. 163, 539
Grzybowski, S. 661
Gunther, E. W. 720
Gutraj, J. M. 123, 142
Gyorffy, B. L. 562

H

Habenschuss, A. 631, 633
Haberl, J. S. 291
Hackner, R. J. 126
Hahn, J. M. 711
Haissig, B. E. 790, 799, 800, 819, 844, 878, 895, 905
Hall, J. A. 270, 277
Hall, R. B. 791
Haltom, C. P. 590, 743
Hamilton, R. M. 711
Hamlin, D. C. 896
Hammarstrom, J. L. 339
Hammond, J. P. 364, 439
Hamrick, J. L. 818
Han, B. J. 218
Hankins, K. E. 505
Hansen, E. A. 857, 858, 888, 894
Hansen, J. J. 369
Hansen, J. S. 318, 339
Hansen, P. H. 877
Hanusiak, W. M. 394
Harry, D. E. 809
Hartline, S. D. 340
Haselkorn, M. 313, 343
Hausner, H. 335
Havstad, P. H. 469, 473
Hawkins, D. R. 836
Hay, P. H. 609
Hayes, J. 40
Haynes, H. D. 117
Heatherly, L. J. 615
Hebner, R. E. 664
Hecht, N. L. 305, 309, 319, 416
Heichel, D. W. 413
Heilman, P. E. 792, 821, 850, 904
Henson, H. M. 589
Henson, T. J. 584, 589, 736
Hettiarachchi, S. 534
Hettwer, P. F. 712
Hewitt, D. C. 286
Heyer, S. V. 710
Hicks, K. L. 666
Hileman, A. R. 726
Hill, D. H. 68
Hill, L. J. 2
Hilliard, M. 91
Hillis, S. L. 442, 445, 446, 456, 463, 464, 468, 472, 475, 482, 492
Hilton, S. 305, 309
Hinckley, T. M. 821, 870, 901
Hine, T. 370, 417
Hirst, E. A. 2, 3, 5, 6, 8-13, 16, 18, 19, 22, 24-26, 28, 29, 33, 35-37, 39, 41, 43, 46, 51-55, 64, 67, 68, 70, 82, 84, 86-88, 92
Hobson, D. O. 580
Hockey, B. J. 322
Hodgson, J. W. 442, 456, 458, 463-465, 485, 491
Hoenigman, J. R. 305, 309
Holcomb, M. C. 71
Holmes, J. 292
Holmes, J. M. 925, 930
Holub, E. 91
Hook, D. D. 876
Horn, G. 536
Hornbeck, J. W. 855, 864
Hornicsar, C. 899
Horowitz, S. H. 665, 713
Horton, J. A. . 560, 568, 572-574, 581, 585
Host, G. E. 793, 795
Houska, C. R. 631-633, 640
Howard, A. J. 926, 933
Howells, E. 712
Hsu, S. M. 335, 639
Hsueh, C. H. 361, 385
Hu, P. S. 1, 15, 31, 34, 38, 47, 69, 73, 77, 90, 278, 280, 722
Huang, B. Y. 555
Huang, Y. J. 221
Hubbard, C. R. 735
Hubbard, M. 261, 262
Huckabee, M. L. 338, 380, 402, 405
Hudson, T. L. 678
Hughes, P. J. 126
Hunsaker, D. B., Jr. 825
Hunter, C. E. 469, 473
Huntley, W. R. 193
Hutchinson, M. 241
Hwang, B.-H. 631-633, 635
Hwang, H. L. 266

I

Ice, G. E. 631, 633
Ildstad, E. 694
Iqbal, S. 728
Isebrands, J. G. 795, 801, 821, 852, 856, 877

J

Jackins, G. A., Jr. 292
Jackson, W. L. 122
Jang, S. D. 309, 416
Janney, M. A. 394, 401, 427, 436, 544, 552, 553
Janssen, J. E. 206
Jenkins, M. G. 321, 410, 411
Johnson, C. A. 345, 415
Johnson, D. R. . . 302, 307, 334, 335, 354, 362, 383, 388, 394, 395, 399, 423, 425
Johnson, D. W. . . 854, 855, 864, 885, 887
Johnson, J. 703
Johnson, J. S., Jr. 514, 515, 519, 521
Johnson, K. D. 782, 846
Johnson, M. A. 781
Johnson-Mohler, E. 75, 238
Johnson, W. D. 833
Johnson, W. S. 143
Johnston, C. A. 834
Johnston, J. W., Jr. 776, 783, 814, 842, 867, 898
Jones, D. W. 81, 886
Jones, E. C. 563, 564
Jordan, A. 552, 595
Jordan, A. C. 552
Joslin, D. L. 328, 357
Joyce, T. W. 517
Jurgensen, M. F. 896

K

Kahl, W. K. . 308, 352, 363, 444, 462, 499
Kang, S. 310, 348
Kannberg, L. D. 746
Kaplan, S. I. 932, 933
Karasek, K. 337, 372, 378
Kardas, A. 745
Karnitz, M. A. 117, 254, 255, 270, 277, 281, 282, 295, 298, 300, 301
Kauffield, M. 99
Keating, H. 426, 606
Kedl, R. J. 748, 760
Kee, D. D. 784, 823
Keiser, J. R. 617
Kelkar, A. 347
Kelley, E. F. 664
Kelley, F. 313, 343
Kelly, J. M. 855
Kempton, W. 68
Kenney, W. A. 805
Kertesz, M. P. 552
Keshock, E. G. 94, 129
Ketcham, T. D. 564
Keyes, B. L. P. 303, 311
Khandelwal, P. K. 336
Kidd, G. H. 878
Kim, C. 497, 502
Kim, H. 310
Kim, K. 310
Kim, K. S. 348
Kim, N. 217
Kin, Y. C. 737
Kirk, J. A. 764
Kirkpatrick, J. R. 211, 251
Kirmse, R. D. 820
Kladivko, E. J. 782
Klareich, F. H. 187
Klass, S. 875
Klatt, L. N. 169
Klein, K. W. 685
Klemens, P. G. 217
Knapp, C. E. 366
Knutsen, C. 52
Kobayashi, A. S. 410, 411
Koch, C. C. 567
Koester, D. A. 332
Kolb, J. O. 81, 261, 271, 287, 299
Kollie, T. G. 173, 181
Konoike, T. 603
Kopp, R. F. 853
Kornhauser, A. A. 145
Korus, R. A. 824
Krahn, L. 216
Krarti, M. 184
Krause, F. 36, 37
Kreitler, V. 83
Kroeger, D. M. 719, 735–743
Kroner, W. 92
Krummel, J. 872, 886, 891
Kruse, V. J. 658, 660, 726
Kuman, D. 184
Kurka, K. 674, 702, 716

L

Labs, K. 221, 240
Lago, R. 836
Lai, J. S. 676
Lai, Y.-Z. 896
Laing, P. M. 450
Lander, M. L. 397
Landrum, H. L., Jr. 173
Landsberg, J. J. 828
Larsen, R. P. 472
Larson, S. C. 235, 245, 246
Lasseter, R. H. 710
Lathwell, D. J. 779
Lauf, R. J. 743
Lawler, J. S. 659, 669, 675, 676, 681, 722
Lay, K. W. 563, 564
Layton, P. A. 796, 805, 810, 835, 866, 889, 893, 897
Lebow, M. A. 710
Ledin, S. 788
Lee, E. H. 568, 584
Lee, R. 69
Lefebvre, A. H. 489, 496, 504
Legg, K. O. 602
Legro, J. R. 680, 726
Leitnaker, J. M. 638
Lesney, M. S. 839
Lestz, S. S. 505
Levins, W. P. 117, 267, 270, 277, 281, 295, 298, 300
Levinson, T. M. 639
Lewis, M. B. 643
Liang, J.-C. 48
Liechty, H. O. 896
Lilley, E. 351
Lin, H. T. 331
Lindemer, T. B. 736
Linders, J. R. 666
Litvin, A. 213
Litzinger, T. A. . . . 455, 459, 461, 487, 505
Liu, C. T. 557, 559, 567, 568, 574, 582, 584, 585, 591, 608
Liu, K. C. 308, 320, 347, 352, 358, 360, 363, 376, 418, 438
Liu, T. K. 667
Liu, W. 322
Liu, Z. 723
Lizzio, A. 515
Long, C. E. 881
Long, E. L., Jr. 499
Long, W. F. 710
Longmire, C. L. 711
Lord, B. E. 899
Lothner, D. C. 806
Love, P. M. 183, 200
Lovett, W. R. 853
Low, J. J. 569
Lowenberg-DeBoer, J. 778
Lowndes, D. H. 563, 564
Loxton, C. M. 560
Lucheta, R. A. 156
Lux, A. E. 661
Luxmoore, R. J. 815
Lyle, F. F., Jr. 467, 501
Lynd, L. R. 794

M

MacDonald, J. M. 188, 256, 258, 269, 273, 276, 279, 282, 288, 291–293, 299, 663
Macey, S. M. 17
Macriss, R. A. 107, 123, 142, 162
Maguire, M. C. 577
Mahler, K. A. 808, 861, 903
Major, C. H. 23
Major, R. W. 655, 668
Majumdar, B. S. 350
Malcolm, E. W. 781
Mann, L. K. 864
Manwiller, K. E. 366
Marans, R. W. 58
Markel, L. C. 722
Marland, G. 787
Marsh, G. C. 736
Martin, C. W. 864
Martin, J. F. 766, 768, 771-773
Martin, M. 412
Martin, P. C. 244
Martin, R. L. 321
Mashikian, M. S. 694
Mason, T. W. 63
Masterson, D. 466
Mathiprakasam, B. 118, 147
Mattson, J. A. 789
Maybee, C. 779
McBrayer, J. F. 825
McCamy, J. W. 564
McCauley, J. W. 335
McClung, R. W. . 374, 388, 394, 566, 594
McClure, P. K. 292
McCluskey, P. H. 329
McCold, L. N. 283, 285, 286, 296

McConnell, B. W. 704, 706
McCool, J. I. 616, 628
McCorkle, J. 232
McCormick, P. O. 770
McCown, B. H. 819, 840, 905
McCoy, H. E., Jr. 654
McCullum, D. E. 305, 309, 319, 416
McElroy, D. L. . . . 161, 172–174, 177, 178, 181, 182, 198, 208, 233, 242, 387
McEvers, J. A. 540
McGill, R. N. 442, 445, 446, 448, 456, 458, 463, 464, 468, 472, 475, 482, 485, 492, 494, 508, 510, 512
McGranaghan, M. F. 705, 720
McGraw, B. A. 143
McGraw-Edison Power Systems 725
McHargue, C. J. 357, 390, 391, 642
McIver, J. C. 710
McKamey, C. G. 573, 719
McKenna, J. R. 816
McKinley, K. F. 722
McLain, H. A. 230, 288
McLaughlin, R. A. 857, 888
McLinden, M. 99
McMahon, J. E. 20
McNabb, H. E. 802
McNabb, H. S., Jr. 841
McNabb, W. A. 835, 866
McNatt, J. D. 216
McRoberts, R. E. 877
Mdafri, A. 778
Medelius, P. 686, 691, 703
Mehosky, B. L. 333
Mei, V. C. 98, 105, 116, 118, 127, 132, 137, 147, 149, 155
Meixel, G. 240
Melichar, L. 881
Melton, B. S. 226
Mertol, A. 236, 237
Meskimen, G. F. 874
Miami, Univ. of 498
Michael, D. A. 795, 801, 852
Michelson, E. 163, 539
Michler, C. H. 844
Mihlmester, P. E. 275
Milberg, M. E. 421
Miller, D. B. 661
Miller, W. A. . 109, 111, 117, 131, 135, 150
Minton, N. A. 786
Misuriello, H. 274, 299
Mixon, W. R. 274, 282
Miyasaka, S. C. 869
Mizuhara, H. 348
Modine, F. A. 655, 657, 668, 672, 683, 688, 715
Mohre, D. L. 167
Mokatef, S. 189, 197
Monteen, L. D. 676, 722, 724
Moore, N. L. 21
Moorhead, A. J. . 426, 589, 596–598, 606
More, K. L. 332
Morel, T. 392
Morell, J. A. 650
Morgan, S. J. 50
Morris, L. E. 595
Morris, M. D. 714, 768
Moy, C. A. 747, 758
Mroz, G. D. 896
Mukherjee, A. K. 561
Mulroney, P. 226
Mulroy, W. 99, 157
Murphy, R. W. 94, 105, 129, 146
Murray, M. D. 876
Mutsuddy, B. C. 350

N

Natansohn, S. 317
Naus, D. J. 254
Naylor, M. G. S. 312, 353
Neff, H. P., Jr. 673
Nehmadi, M. 664
Neil, J. T. 338, 365, 380
Nelson, B. D. 241
Nelson, G. D. 241
Nelson, J. K. 712
Nelson, N. D. 801, 852, 878
Nelson, W. R. 681, 682
Nemethy, E. K. 836
Newton, B. K. 722
Nichol, J. 666
Nichols, R. J. 794
Nicholson, D. M. 562, 576
Nicholson, J. M. 306, 316, 359
Nicol, J. L. 264
Nieh, T. G. 591
Nixon, R. 402
Nolan, M. G. 698
Nordh, N. E. 788
Norton, D. P. 563, 564
Noun, R. J. 21

O

O'Leary, L. 286
O'Neal, G. B. 477, 483
O'Neill, R. V. 891
O'Niel, D. 310
Oblas, D. W. 341
Ogle, J. C. 435
Ohr, S.Y. 230
Ohriner, E. K. 573
Oliver, B. F. 555
Oliver, W. C. 328, 357, 555, 575
Olszewski, M. 751, 764, 768
Ong, E. T. 745, 773
Osborne, R. W. 167
Ostrogorsky, A. G. 243, 250
Ostry, M. E. 788, 802, 841
Otvos, J. W. 836
Oye, H. A. 739

P

Pace, M. O. 664
Padgett, R. A. 740-742
Palumbo, J. H. 459
Pan, Y. M. 433
Park, J. E. 211, 251
Parker, D. 221
Parrish, D. J. 785, 816, 817, 902
Pasto, A. E. 317
Patten, D. O. 349
Patterson, M. R. 101, 130, 530, 538
Patton, J. B. 659, 675, 676, 681, 722
Pawel, J. E. 371, 390, 391
Peach, H. G. 64
Pearman, N. 229
Pennsylvania St. Univ. 495
Perez-Blanco, H. 101, 130, 133, 169, 530, 538
Perlack, R. 873, 890, 897
Perry, A. M. 158
Petersen, S. R. 196
Peterson, C. L. 824
Petri, R. J. 745, 773
Petrie, T. W. 205
Pettifor, D. G. 574
Pfeifer, R. A. 779
Pflanz, H. M. 709
Phadke, A. 665, 713
Phillips, B. A. 93
Phillips, D. R. 882
Pierce, R. S. 855
Pih, H. 360
Pimentel, D. 872
Plastics Inst. of America 600, 601
Poche, J. M. 292
Poirier, R. 756
Pollinger, J. P. 344
Pompe, R. 335
Pope, P. E. 857, 888
Pope, S. G. 602
Post, W. M. 815
Povirk, G. L. 573
Pratt, D. C. 833, 845
Preckel, P. 778
Predmesky, R. L. 306, 316, 359
Price, J. M. 770
Prindle, B. 7
Privon, G. T. 148
Prouse, D. W. 369
Prowler, D. 75, 238
Pruchnic, S. J., Jr. 393
Pujari, V. K. 318, 339, 340
Purucker, S. L. 60, 66, 722, 724

Q

Quinn, G. D. 304
Quinn, T. F. J. 637

R

Rackcliffe, G. B. 658
Radwan, M. A. 851
Ragins, B. R. 63
Rajan, S. 500
Ramrus, A. 727
Ranney, J. W. 796, 810, 835, 848, 866, 889, 890, 897, 900
Rao, S. 640
Rasmussen, R. W. 206
Rauscher, H. M. 793, 795
Raymer, P. L. 786
Rayner, S. 63
Rebenne, H. E. 341, 375
Reddy, C. S. 454
Reddy, K. V. 874
Reed, D. A. 673
Reed, J. H. 671, 682, 684, 722

Reeves, M. 921
Resetar, T. M. 335
Rettberg, W. A. 292
Reyes, I. 879, 880
Rice, C. K. 95, 122, 136, 153
Ridge, C. R. 901
Riekerk, H. 864
Rietveld, W. J. 871
Rink, K. K. 489, 504
Ritchie, R. H. 697, 718, 732, 733
Ritschard, R. L. 282
Rizy, D. T. 659, 675, 676, 681, 692, 705, 720, 722, 728
Robinson, D. A. 241
Rockefeller, G. D. 666
Rockenfeller, U. . 536, 750, 767, 769, 772
Rockwood, D. L. 839, 874, 892
Roesler, D. L. 722
Rogers, R. S. C. 333
Ronnberg-Wastljung, A. 788
Rose, P. A. 823
Rose, P. H. 292
Rosenfield, A. R. 384, 409
Ross, D. E. 292
Rossi, G. A. 318, 339, 349, 351, 366
Roux, J. A. 225
Rubinstein, M. 662, 691, 703
Ruggles, M. B. 541
Ryan, T. W., III 471, 481, 488
Rynkowski, A. 723

S

Saito, K. 723
Sajak, R. L. 896
Sakai, M. 410, 432, 433
Salk, M. S. 868
Salomone, L. R. 210
Salyer, I. O. 755
Sand, J. R. 95, 96, 110, 111, 121
Sanders, J. P. 224
Sands, S. H. 667
Sankar, J. 347, 377
Santana, E. A. 752
Santella, M. L. 364, 386, 439, 577, 581, 590
Santini, D. J. 20
Sarin, V. K. 341, 375
Sauers, I. 674, 698-702, 716, 717, 729-731, 734
Scarascia-Mugnozza, G. 821
Scarbrough, J. O. 719, 736, 740
Schaefer, G. E. 335
Scheid, H. W. 865
Scheithauer, R. 838
Scherr, M. I. 7
Schienle, J. 337, 372, 378, 398, 412
Schlegel, J. A. 285, 286
Schneider, T. R. 556
Schubert, T. H. 807, 822
Schulte, P. J. 821, 870
Schutt, J. R. 900
Schweitzer, M. . 2, 12, 19, 24, 43, 63, 259
Scofield, M. P. 174
Scott, C. D. . 907, 909, 911–918, 920, 931
Scott, P. V. 511
Scott, T. 226
Scull, N. 497, 502
Sederoff, R. R. 809
Sefer, N. R. 460, 470, 481, 486, 503
Sekula, S. T. 737
Sellmer, J. C. 819, 905
Selverian, J. H. 310
Sennerby-Forsse, L. 805
Shaffer, P. T. B. 553
Shapiro, A. 626
Sharp, T. R. 188, 265, 269, 273, 279, 293
Shaw, J. H. 679
Shen, L. 221, 240
Sheppard, K. 214
Sherman, M. H. 282
Shetty, D. K. 369, 414
Shim, Y. 683
Shipp, P. H. 205, 222, 224
Shirley, S. T. 231
Shonka, D. B. 31
Shugart, H. H. 900
Siebein, K. N. 318, 339
Sikka, V. K. 561, 568, 586, 599, 608
Silver, M. N. 655, 668
Simpson, T. L. 721
Simpson, W. A. 352, 363, 374, 439
Simpson, W. A., Jr. 566, 594
Sinha, A. 347
Sircar, A. 755
Sisson, W. G. 927-929, 931
Sklad, P. S. 642, 643
Skrukrud, C. L. 836
Sladden, S. E. 784, 811, 823
Smidt, F. 630
Smith, B. 821
Smith, C. T. 864
Smith, D. 859

Smith, I. D. 712
Smith, J. L., Jr. 145
Smith, S. A. 21
Smyth, J. 398
Snell, S. 648-650
Snell, S. A. 45, 49, 81
Snoha, D. J. 304
Soderstrom, E. J. 650
Solnick-Legg, H. F. 602
Solomon, A. D. 751, 754, 768
Sols, F. 697, 718
Sparks, C. J. 739
Specht, E. D. 737, 739
Spooner, S. 516
Spyrou, S. M. 731
St. Julien, D. 564
Stansbury, E. E. 186
Stanton, B. J. 850
Starr, E. C. 710
Statt, T. G. 110
Stephanopoulos, G. N. 919
Sterling, R. 221, 240
Stern, P. C. 68
Stettler, R. F. . . . 792, 821, 850, 901, 904
Stevens, R. A. 696
Stewart, J. R. 685, 690
Stewart, W. E., Jr. 749, 753
Stickler, L. A. 753
Stiel, L. I. 752, 765
Stiles, E. D. 359
Stimely, G. L. 862, 899
Stinhilb, H. M. 896
Stinton, D. P. 579
Stocks, G. M. 562
Stoecker, W. F. 138, 160
Stoloff, N. S. 567
Stone, J. W. 691, 703
Storm, R. S. 333
Stovall, J. P. 651, 705, 710
Stovall, T. K. 59, 264, 289, 760
Stover, L. R. 862, 899
Strain, J. C. 169
Strand, R. F. 807
Strauss, C. H. 797, 803, 804, 843, 862, 863, 899
Stucky, D. 778
Suelzle, L. R. 689
Sugihara, G. 891
Sullivan, R. 236, 237
Sullivan, R. L. 710, 722
Sumner, D. R. 786
Sundberg, G. J. 318, 349
Surles, S. E. 818
Swab, J. J. 304, 325, 326, 355, 403
Swain, M. N. 457, 484, 511
Swain, M. R. 457, 484, 511
Swain, M. V. 406
Swank, W. T. 855, 864
Swanson, R. E. 346
Swartz, S. L. 350
Swedish Motor Fuel Tech. Co. 474

T

Taub, A. I. 567
Taylor, E. R., Jr. 726
Taylor, M. J. 751, 762
Taylor, S. E. 836
Teng, K. 378
Tennery, V. J. 321, 323
TenWolde, A. 216
Ternes, M. P. 265–267, 272, 278, 280, 283, 294, 299
Tesche, F. M. 656, 660, 667, 670, 677, 687, 695, 706, 726
Tew, T. 882
Tewari, P. H. 340
Thacker, W. 774
Thomas, D. L. 786
Thomas, J. R., Jr. 223
Thomas, R. J. 724
Thompson, J. C. 671
Thompson, J. E. 908, 911
Thompson, J. R. 737
Thomson, E. M. 686, 691, 703
Thorp, J. S. 665, 713
Tiegs, T. N. . 315, 327, 329, 330, 361, 385, 389, 396, 400, 401, 408, 419, 427, 430, 431, 435, 437, 440, 573
Till, L. E. 77
Ting, B.-Y. 622, 623, 636
Tinus, R. W. 871
Tksczyk, J. E. 563, 564
Todd, D. E. 854, 885
Tomlinson, J. J. 744, 746, 748, 751, 759, 762
Tong, T. W. 247
Tonn, B. E. 62, 66, 78, 91
Torpey, M. R. 212
Torreano, S. J. 849
Tortorelli, P. F. 543, 565
Trimble, J. L. 897
Triolo, R. . . 515, 516, 519, 521, 522, 524

Tritton, L. M. 864
Troyer, R. 249
Trumble, D. A. 44, 70, 87
Tschaplinski, T. J. 826, 827, 829, 830, 832
Tucker, W. T. 345, 415
Tuluca, A. 184, 215
Tunstall, J. N. 251
Turhollow, A. F. 776, 787, 796, 814, 837, 842, 867, 898
Turner, R. H. 152
Tye, R. P. 175, 184, 228

U

Uman, M. A. 653, 662, 686, 691, 693, 703
Urban, C. M. 477
Urquidi-Macdonald, M. 534

V

Vaccari, D. L. 336
Vaidyanathan, R. 377
Valore, R., Jr. 215
Van Brunt, R. J. 730
Van Geem, M. G. 207, 213, 231, 235, 245, 246
Van Lear, D. H. 855, 864
Van Miegroet, H. 855
Van Volkenburgh, E. 821, 901
Vance, E. F. 693
Vance, M. C. 544, 552
Vaughan, D. H. 785, 817
Venezia, A. M. 560
Venkateswaran, V. 333
Verschoor, J. D. 244
Veverka, E. F. 704, 712
Veyo, S. E. 156
Vineyard, E. A. 110, 111, 134
Vineyard, T. 297
Vinyard, S. 481, 507
Virkar, A. V. 369, 414
Volenec, J. J. 782, 846
Vonier, T. 184
Vories, R. 257
Votaw, P. C. 701, 702

W

Waddle, D. B. 663
Wadsworth, J. 591
Wagner, C. L. 666
Wahiduzzaman, S. 392
Wakenell, J. F. 477, 483
Waldman, D. J. 447, 451
Walldorf, S. P. 708
Walling, R. A. 710
Wantland, J. L. 482, 492
Ward, C. Y. 823
Warner-Selph, M. A. 481
Warren, J. W. 433
Warwick, W. H. 327, 435
Wasserman, D. M. 276
Watts, R. L. 21
Weaver, F. J. 161, 173, 177, 181, 182, 242, 387
Weaver, R. S. 183
Weil, R. 214
Weiss, C. D. 313, 343
Weiss, P. 30
Wenzel, C. R. 866, 897
Werst, S. H. 173
West, B. H. 308, 442, 443, 445, 446, 456, 463, 464
West, D. C. 864
Wetherington, G. R. 682, 722
Wheeler, R. B. 657, 683, 715
Whitaker, R. A. 546
White, C. L. 642
White, D. L. 7, 32, 57, 60, 62, 72, 78, 257, 262, 263, 297
White, K. W. 410, 411
Whitenton, E. P. 625, 626
Whitesell, C. D. 807, 822, 869
Wiard, B. 821, 856
Wiederhorn, S. M. 322, 422, 429
Wiesman, C. 859
Wilbanks, T. J. 68
Wilkes, K. E. 190, 224, 268, 271, 284, 290
Williams, J. M. 642
Williams, L. S. 15, 34, 38, 47
Williams, R. K. 329, 373, 387, 401, 735, 736, 740, 742, 743
Williams, V. 292
Willkens, C. A. 339, 367, 379
Willman, A. J. 292
Wilson, B. C. 876
Wilson, C. R. 644
Wilson, D. F. 617
Wilson, L. F. 841
Winer, W. O. 622, 636, 637, 641
Winsor, R. E. 450

Wintenberg, A. L. 664
Wolf, D. D. 785, 816
Wolf, J. D. 305, 309
Wolf, J. S. 525
Wolf, S. M. 556
Wolfe, A. K. 63
Wong, P. S. 344
Wong, V. W. 453
Woodfin, S. L. 847
Woodward, J. 911
Wright, J. 875
Wright, L. L. 780, 796, 798, 804, 810, 812, 828, 831, 835, 847, 848, 866, 889, 893, 897
Wright, N. 777
Wu, F. J. 349
Wyman, C. E. 794

Y

Yajnik, S. 225
Yaney, P. 305, 309
Yarbrough, D. W. . . . 151, 177, 178, 180, 182, 195, 198, 199, 218, 233, 242, 252, 284, 373, 401
Yeh, H. C. 337, 344, 372, 378, 412
Yost, R. S. 869
Young, R. R. 156
Younkins, T. D. 707
Yourstone, E. 12, 19
Yust, C. S. 614, 615, 627, 638, 639, 642, 643

Z

Zawacki, T. S. 107, 123, 142, 162
Zeidler, P. 263
Zerega, A. M. 49
Zilberstein, G. 338, 365, 380, 404
Zimmerman, K. H. 141, 154, 166, 168

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