

# David Patiño

## List of Publications by Year in descending order

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54  
papers

1,732  
citations

279798

23  
h-index

289244

40  
g-index

54  
all docs

54  
docs citations

54  
times ranked

1242  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Experimental analysis of the ignition front propagation of several biomass fuels in a fixed-bed combustor. <i>Fuel</i> , 2010, 89, 26-35.  | 6.4  | 157       |
| 2  | CFD modelling of thermal conversion and packed bed compaction in biomass combustion. <i>Fuel</i> , 2014, 117, 716-732.   | 6.4  | 118       |
| 3  | Numerical modeling of the combustion of densified wood under fixed-bed conditions. <i>Fuel</i> , 2012, 93, 149-159.  | 6.4  | 108       |
| 4  | Evolution of CO2 capture technology between 2007 and 2017 through the study of patent activity. <i>Applied Energy</i> , 2018, 211, 1282-1296.  | 10.1 | 95        |
| 5  | Numerical Modeling of a Biomass Pellet Domestic Boiler. <i>Energy &amp; Fuels</i> , 2009, 23, 1067-1075.   | 5.1  | 93        |
| 6  | Review of the use of additives to mitigate operational problems associated with the combustion of biomass with high content in ash-forming species. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 141, 110502. | 16.4 | 71        |
| 7  | A Model for the Combustion of Large Particles of Densified Wood. <i>Energy &amp; Fuels</i> , 2007, 21, 3151-3159.  | 5.1  | 68        |
| 8  | Study of a Fixed-Bed Biomass Combustor: Influential Parameters on Ignition Front Propagation Using Parametric Analysis. <i>Energy &amp; Fuels</i> , 2010, 24, 3890-3897.   | 5.1  | 57        |
| 9  | CFD simulation of a solar radiation absorber. <i>International Journal of Heat and Mass Transfer</i> , 2013, 57, 231-240.  | 4.8  | 55        |
| 10 | Fast-solving thermally thick model of biomass particles embedded in a CFD code for the simulation of fixed-bed burners. <i>Energy Conversion and Management</i> , 2015, 105, 30-44.                                      | 9.2  | 54        |
| 11 | Numerical simulation of the combustion process of a pellet-drop-feed boiler. <i>Fuel</i> , 2016, 184, 987-999.   | 6.4  | 54        |
| 12 | Study of the reaction front thickness in a counter-current fixed-bed combustor of a pelletised biomass. <i>Combustion and Flame</i> , 2012, 159, 1296-1302.  | 5.2  | 51        |
| 13 | Eulerian CFD modelling for biomass combustion. Transient simulation of an underfeed pellet boiler. <i>Energy Conversion and Management</i> , 2015, 101, 666-680.   | 9.2  | 51        |
| 14 | Air staging strategies in biomass combustion-gaseous and particulate emission reduction potentials. <i>Fuel Processing Technology</i> , 2017, 157, 29-41.  | 7.2  | 50        |
| 15 | Diesel engine condition monitoring using a multi-net neural network system with nonintrusive sensors. <i>Applied Thermal Engineering</i> , 2011, 31, 4097-4105.  | 6.0  | 49        |
| 16 | Three-dimensional CFD simulation of a large-scale grate-fired biomass furnace. <i>Fuel Processing Technology</i> , 2020, 198, 106219.  | 7.2  | 39        |
| 17 | Characterisation and comparison of biomass ashes with different thermal histories using TG-DSC. <i>Journal of Thermal Analysis and Calorimetry</i> , 2014, 118, 669-680.   | 3.6  | 36        |
| 18 | Simulation and experimental validation of a methanol burner. <i>Fuel</i> , 2009, 88, 326-334.  | 6.4  | 28        |

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|----|--|-----|-----------|
| 19 | An experimental study into the effect of air staging distribution and position on emissions in a laboratory scale biomass combustor. <i>Energy</i> , 2017, 118, 1243-1255.   | 8.8 | 28        |
| 20 | Effect of freeboard deflectors in the fixed bed combustion of biomass. <i>Applied Thermal Engineering</i> , 2016, 103, 543-552.  | 6.0 | 27        |
| 21 | Dynamic simulation of a biomass domestic boiler under thermally thick considerations. <i>Energy Conversion and Management</i> , 2017, 140, 260-272.  | 9.2 | 27        |
| 22 | A Comparative Study of Fouling and Bottom Ash from Woody Biomass Combustion in a Fixed-Bed Small-Scale Boiler and Evaluation of the Analytical Techniques Used. <i>Sustainability</i> , 2015, 7, 5819-5837.        | 3.2 | 26        |
| 23 | Experimental analysis of fouling rates in two small-scale domestic boilers. <i>Applied Thermal Engineering</i> , 2016, 100, 849-860.   | 6.0 | 26        |
| 24 | Comprehensive CFD modeling of the ash deposition in a biomass packed bed burner. <i>Fuel</i> , 2018, 234, 1099-1122.   | 6.4 | 25        |
| 25 | Improving the Cofiring Process of Wood Pellet and Refuse Derived Fuel in a Small-Scale Boiler Plant. <i>Energy &amp; Fuels</i> , 2008, 22, 2121-2128.  | 5.1 | 23        |
| 26 | Study of the feasibility of mixing Refuse Derived Fuels with wood pellets through the grey and Fuzzy theory. <i>Renewable Energy</i> , 2009, 34, 2607-2612.  | 8.9 | 22        |
| 27 | Effect of Air Staging Ratios on the Burning Rate and Emissions in an Underfeed Fixed-Bed Biomass Combustor. <i>Energies</i> , 2016, 9, 940.  | 3.1 | 22        |
| 28 | Experimental study on the fouling behaviour of an underfeed fixed-bed biomass combustor. <i>Applied Thermal Engineering</i> , 2017, 112, 523-533.  | 6.0 | 22        |
| 29 | Low-Quality Fuels for Small-Scale Combustion Boilers: An Experimental Study. <i>Energy &amp; Fuels</i> , 2015, 29, 3064-3081.  | 5.1 | 20        |
| 30 | Experimental study of a tubular-type ESP for small-scale biomass boilers. Preliminary results in a diesel engine. <i>Powder Technology</i> , 2016, 288, 164-175.   | 4.2 | 19        |
| 31 | Devolatilization behaviour and pyrolysis kinetic modelling of Spanish biomass fuels. <i>Journal of Thermal Analysis and Calorimetry</i> , 2013, 113, 569-578.  | 3.6 | 18        |
| 32 | Three-dimensional model of electrostatic precipitators for the estimation of their particle collection efficiency. <i>Fuel Processing Technology</i> , 2016, 143, 86-99.   | 7.2 | 16        |
| 33 | CFD study of fouling phenomena in small-scale biomass boilers: Experimental validation with two different boilers. <i>Renewable Energy</i> , 2019, 140, 552-562.   | 8.9 | 16        |
| 34 | NSM solution for unsteady MHD Couette flow of a dusty conducting fluid with variable viscosity and electric conductivity. <i>Applied Mathematical Modelling</i> , 2011, 35, 303-316.                               | 4.2 | 15        |
| 35 | Unsteady MHD free convection of a micropolar fluid between two parallel porous vertical walls with convection from the ambient. <i>International Communications in Heat and Mass Transfer</i> , 2009, 36, 203-209. | 5.6 | 14        |
| 36 | Heterogenic Solid Biofuel Sampling Methodology and Uncertainty Associated with Prompt Analysis. <i>International Journal of Molecular Sciences</i> , 2010, 11, 2118-2133.  | 4.1 | 14        |

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|----|--|------|-----------|
| 37 | Biological systems for CCS: Patent review as a criterion for technological development. Applied Energy, 2020, 257, 114032.   | 10.1 | 12        |
| 38 | Novel Test Bench for the Active Reduction of Biomass Particulate Matter Emissions. Sustainability, 2020, 12, 422.  | 3.2  | 12        |
| 39 | A practice for engineering students based on the control and monitoring an experimental biomass combustor using labview. Computer Applications in Engineering Education, 2017, 25, 392-403.                                    | 3.4  | 11        |
| 40 | Experimental Study of the Viability of Low-Grade Biofuels in Small-Scale Appliances. Sustainability, 2017, 9, 1823.  | 3.2  | 11        |
| 41 | Performance of a lab-scale tubular-type electrostatic precipitator using a diesel engine particle emission source. Energy, 2016, 116, 1444-1453.   | 8.8  | 10        |
| 42 | Methodologies for Processing Fixed Bed Combustor Data. Combustion Science and Technology, 2017, 189, 79-102.   | 2.3  | 9         |
| 43 | Influence of the Feeding Rate on the Transient Behavior of a Biomass Combustor. Chemical Engineering and Technology, 2019, 42, 2520-2529.  | 1.5  | 8         |
| 44 | Viability Evaluation of Three Grass Biofuels: Experimental Study in a Small-Scale Combustor. Energies, 2019, 12, 1352.   | 3.1  | 8         |
| 45 | Performance analysis of a small-scale electrostatic precipitator with biomass combustion. Biomass and Bioenergy, 2022, 162, 106500.  | 5.7  | 8         |
| 46 | Multi-objective utilization of wood waste recycled from construction and demolition (C&D): Products and characterization. Waste Management, 2022, 149, 228-238.  | 7.4  | 8         |
| 47 | PM reduction and flame confinement in biomass combustion using a porous inert material. Fuel, 2020, 280, 118496.   | 6.4  | 6         |
| 48 | Available exhaust gas power in different configurations in a pellet stove plant. Renewable Energy, 2009, 34, 2852-2859.  | 8.9  | 5         |
| 49 | TG/DSC and kinetic parametrization of the combustion of agricultural and forestry residues. Biomass and Bioenergy, 2022, 162, 106485.  | 5.7  | 4         |
| 50 | Validation of a Fouling Measurement Procedure. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-8.  | 4.7  | 3         |
| 51 | The motion of discs and spherical fuel particles in combustion burners based on Monte Carlo simulation. Energy Conversion and Management, 2010, 51, 795-801.   | 9.2  | 1         |
| 52 | Experimental analysis of several biomass fuels: The effect of the devolatilization rate on packed bed combustion. Journal of Renewable and Sustainable Energy, 2012, 4, 053104.  | 2.0  | 1         |
| 53 | STUDY OF THE COMBUSTION OF PELLETS AND RDF IN A SMALL BOILER-STOVE PLANT. Clean Air, 2007, 8, 183-197.   | 0.0  | 1         |
| 54 | Network numerical modelling of unsteady MHD-free convection flow with mass transfer, hall current and viscous dissipation effects. International Journal for Numerical Methods in Biomedical Engineering, 2010, 26, 1687-1699. | 2.1  | 0         |