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Fire Research Publications, 1988

Nora H. Jason

U.S. DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
(Formerly National Bureau of Standards)
National Engineering Laboratory
Center for Fire Research
Gaithersburg, MD 20899

May 1989
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National Institute of Standards and Technology
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Competitiveness Act was signed. NIST retains
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U.S. DEPARTMENT OF COMMERCE
Robert Mosbacher, Secretary
NATIONAL INSTITUTE OF STANDARDS
AND TECHNOLOGY
Raymond G. Kammer, Acting Director
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This year a new index has been added, the Keyword Index. If there is a keyword of interest to you, you may locate the complete reference by locating the first author. If more than one author is listed in this Index, it indicates additional references for this keyword. Following each reference, the keywords used to describe the entire document are noted.
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cable trays

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Non-Fire-Retarded Products.
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calorimeters; chromatography; plastics; heat release rate;
compartment fires; fire tests; smoke production

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fire research; cellulose; charring; combustion; fire models; flame spread; ignition; polymers; smoke; soot; toxicity

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smoke detectors; standards; tests; false alarms

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hydrogen chloride; atmospheres; combustion; air

Gross, D.

Measurements of Flame Lengths Under Ceilings.
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flame research; fire plumes; flame height; gas burners; luminous flames; ceilings; crib fires; walls

Gross, D.; Davis, W. D.

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computer models; autoignition; fire spread

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flame spread; ignition; aircraft interiors; material properties

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plastics; polymethylmethacrylate; molecular weight; thermal degradation

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suppression; fire extinguishment; ships; submarines; fabric
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smoke control; elevators (lifts); hazard analysis; piston 
effect; pressurization; smoke

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air conditioning; air movement; computer models; ducts;  
fans; smoke movement; ventilation

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ventilation; fire safety; heating; air conditioning; smoke  
control; stairwells

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Tests.  
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smoke control; air movement; fire tests; pressurization;  
stairwells

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Section 3. Chapter 9, National Fire  
smoke control; smoke movement; stack effect; buoyancy;  
expansion; wind; purging; stairwells

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upholstered furniture; cone calorimeters; heat release  
rate; ignition; mattresses; radiant ignition
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Protection and Conditions During Room Flashover. 
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protective clothing; fire fighters; room fires; flashover; 
burns (injuries); escape means; heat flux; thermal 
protection; turnout coats

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fire models; mathematical models; polymethylmethacrylate; 
salt water models; small scale fire tests; stratified flow; 
walls

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Slab and Its Influence on Heat of Pyrolysis. 
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plastics; polymethylmethacrylate; heat loss; interiors; 
heat of pyrolysis; combustion; conductive heat transfer

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droplets; water sprays; sprinkler systems
Levin, B. C.
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Levine, R. S.

Madrzykowski, D.
Malek, D. E.
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toxicity; carbon monoxide; animals; human behavior; hydrogen chloride; toxic gases; toxicity test methods

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fire plumes; ceilings; temperature measurements; velocity measurements

Matage, T. G.
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diffusion flames; cracking (fracturing); boundary layers; flame spread; mathematical models

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Flame Height.
flame height; diffusion flames; premixed flames; froude number; buoyancy; pool fires; jet flames; free burning fires; fire behavior

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fire suppression; crib fires; fire fighting; room fires; sprinklers; water sprays
Miller, J. H.
Miller, J. H.; Smyth, K. C.
diffusion flames; hydrocarbons; laminar flames

Mountain, R. D.
Mountain, R. D.; Mulholland, G. W.
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Mulholland, G. W.
Mulholland, G. W.
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spectroscopy; quantitative analysis; plasma (physics); human beings; proteins; blood

Ohlemiller, T. J.
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Products of Wood Smolder and Their Relation to Wood-Burning Stoves.
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wood; combustion products; smoke; smoldering combustion;
air pollution; wood stoves

Parker, W. J.
Parker, W. J.
Prediction of the Heat Release Rate of Wood.
wood; heat release; combustion; char; chemical composition;
thermochemistry; thermophysical properties; heat transfer

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fire models; data analysis; experiments; fire tests;
accuracy assessment; room fires; compartment fires;
instruments

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droplets; combustion; atomizing; fuel sprays; nozzles;
velocity

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fire models; buildings; fire growth; bibliographies;
literature reviews; zone models
Quintiere, J. G.
Application of Flame Spread Theory to Predict Material Performance.
Journal of Research of the National Bureau of Standards, Vol. 93, No. 1, 61-70, January/February 1988, and
flame spread; small scale fire tests; walls; ignition

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fire research; scaling; model studies

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Surface Flame Spread.
flame spread; solids; liquid fuels; forest fires

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Model of Three-Dimensional Buoyant Convection Induced by a Room Fire.
compartment fires; room fires; convection; enclosures; hydrodynamics

Rehm, R. G.; Lozier, D. W.; Baum, H. R.; Cooper, L. Y.
mathematical models; buoyant plumes; convection; computation; mathematical models

Rockett, J. A.
Rockett, J. A.
solids; heat transmission; conductive heat transfer; equations; steady state; numerical analysis
Samson, R. J.


soot; agglomerates; data analysis; simulation; smoke; acetylene

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diffusion flames; radiation; soot; turbulent flames; model fires

Snell, J. E.


fire research; fire safety; research facilities

Snell, J. E.; Nelson, H. E.


fire investigations; hotels
Steckler, K. D.
Steckler, K. D.; Mitler, H. E.
Experimental Study of the Pyrolysis Rate of a Polymethyl Methacrylate (PMMA) Wall Panel in a Reduced-Scale Enclosure.
plastics; panel walls; polymethylmethacrylate; pyrolysis rate; ignition; flame spread; enclosures

Stroup, D. W.
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aircraft carriers; aircraft fires; crash fires; fire fighting; training; flame height; flame radiation; radiation heat flux; radiative heat transfer; thermal radiation; wind effects

Stroup, D. W.; Evans, D. D.
Use of Computer Fire Models for Analyzing Thermal Detector Spacing.
fire detection; computers; fire models; heat detection; fire detection systems

Tamura, G. T.
Tamura, G. T.; Klotte, J. H.
Experimental Fire Tower Studies on Controlling Smoke Movement Caused by Stack and Wind Action.
smoke movement; elevators (lifts); fire safety; handicapped; elevator shafts; wind; stack effect

Tewarson, A.
Tewarson, A.
Smoke Point Height and Fire Properties of Materials.
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smoke; alkanes; alkenes; aromatic compounds; carbon monoxide; combustion; diffusion flames; fire tests; polymethylmethacrylate; smoke points; aliphatic compounds
Tjossem, P. J. H.
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Multiphoton Ionization Detection of CH, Carbon Atoms, and O2 in Premixed Hydrocarbon Flames.
flame research; premixed flames; hydrocarbons

Tjossem, P. J. H.; Smyth, K. C.
Optical Measurements of H, OH, and CO in Hydrocarbon Diffusion Flames.
diffusion flames; hydrocarbons; optical measuring instruments

Tu, K. M.
Tu, K. M.; Quintiere, J. G.
Wall Flame Heights.
flame spread; walls; flame height; building materials; heat release rate; heat flux; fire tests

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cone calorimeters; manuals; installation; maintenance; service; training

Villa, K. M.
Villa, K. M.; Krasny, J. F.
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textiles; flammability tests; fabrics; tents; self-extinguishment; test methods

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  fire models; risk assessment; fire hazards; compartment fires; fire risk; computer models

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  sprinklers; burning rate; compartment fires; crib fires; fire growth; fire tests; heat release rate; oxygen consumption

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Quick Response Sprinklers in Office Configurations: Fire Test Results.
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  sprinklers; burning rate; calorimetry; compartment fires; fire growth; fire tests; heat release rate; oxygen consumption; quick response sprinklers; room fires; toxicity

Walton, W. D.; Thomas, P. H.
Estimating Temperatures in Compartment Fires.
  compartment fires; temperature; ignition; fire growth; flashover; computer models; computer programs; enclosures; fire models

Wendt, B.
Wendt, B.; Prahl, J. M.
Discharge Distribution Performance for an Axisymmetric Model of a Fire Sprinkler Head.
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  sprinklers; sprinkler heads; drop sizes; droplets; water sprays

Wichman, I. S.
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Integral Analysis of Two Simple Model Problems of Wind-Aided Flame Spread.
flame spread; fluid dynamics; heat transfer

Yamauchi, Y.

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Prediction of Response Time of Smoke Detectors in Enclosure Fires.
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smoke detectors; computer programs; fire models; ionization
detectors; particle density (concentration); photoelectric
detectors; response time; zone models

Zukoski, E. E.

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compartment fires; fluid flow; fire models; gravity
current; heat transfer; salt water models; smoke transport
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- composite materials
- cone calorimeters
- fire models
- fire research
- flame research
- flame retardants
- oil spills
- plastics
- protective clothing
- smoke control
- smoldering combustion
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