

研究業績

＜火災に関する研究＞

1)火災時における有機質建材の煙の発生能の特性化(I)

半田、鈴木、本間

日本火災学会論文集、 Vol.18, No. 1, 21 (1968)

2)有機質積層材料の着火機構と難燃化について(I)

半田、鈴木、折笠、隅、山口、池田、斉藤

日本火災学会論文集、 Vol.19, No. 2, 9 (1970)

3)木材の長期低温発火による火災発生の検討(I)

半田、鈴木、折笠、高橋

日本火災学会論文集、 Vol.20, No. 1, 11 (1970)

4)火災時に於ける煙の流動パターンに関する考察(I)

半田、浜田

日本火災学会論文集、 Vol.21, No. 1, (1970)

5)有機質建築材料の火災危険度試験法とFire-Modeling(I)

鈴木、半田、池田、斉藤

日本火災学会論文集、 Vol.21, No. 1, 1 (1971)

6)有機質建築材料の火災危険度試験法とFire-Modeling(II)

半田、鈴木、高橋、池田、斉藤

日本火災学会論文集、 Vol.21, No. 1, 25 (1971)

7)木材の長期加熱発火による火災発生の検討(II)

半田、高橋、森田、鈴木、

日本火災学会論文集、 Vol. 21, No. 1, 9 (1971)

8)火災拡大のFire-Modelingと有機質材料のかさ池県土

半田、鈴木、高橋

燃料協会誌、第50巻、第526号、60、 (1971)

9)火災時における有機質建材の煙の発生能の特性化(II)

半田、鈴木、高橋

日本火災学会論文集、 Vol. 21, No. 2, 1 (1972)

10)有機質材料の表面火焰伝播速度の解析(I)

半田、高橋

日本火災学会論文集、 Vol. 21, No. 2, 23 (1972)

11)有機質材料の難燃化とその燃焼特性(I)

半田、高橋、岡田、斉藤、後藤田、川崎

日本火災学会論文集、 Vol. 22, No. 1,2, 9 (1973)

12)有機質建築材料の火災危険度試験法とFire-Modeling(III)

半田、高橋、森田、斉藤

日本火災学会論文集、 Vol. 22, No. 1, 2, 9 (1973)

13)有機質材料の難燃化とその燃焼特性(II)

半田、高橋、長島、竹田、池田、斉藤

日本火災学会論文集、Vol. 24, No. 1,2, 15 (1974)

14)The Combustion Behaviour of Organic Materials and the Evaluation of Fire Retardant Effects by Small Electric Furnace Tests.

T. Handa, A. Takahashi, Proceedings of International Symposium on Fire Safety of Combustible Materials, In Edinburgh, P.287 (1975)

15)The Combustion Characteristics and the Smoking Behaviour of Fire-Retraded Materials, Part (I) Small Furnace Test for the Analysis on the Combustion Characteristics and the Smoking Behaviour of the Fire-Retarede Polymer Materials,

T. Handa, A. Takahashi, T. Nagashima, M. Gotoda, N. Ebihara, M. Saaito, Y. Ikeda
Proc. 18th. JPN. Congr. Mat. Res. P. 182 (1975)

16)Oxyge Index and Other Parameters for the Evaluation on the Effect of Fire-Retardants.

T. Handa, T. Nagashima, H. Takeda, N. Ebihara, A. Takahashi,
Proc. 1976 International Symp. on Flammability and Fire Retardants, p. 45 (1976)

17)火災時における熱気流の流動パターンに関する考察(II) 室内熱気流の流動パターンの数値解析法
半田、森田

日本火災学会論文集、Vol. 26, No. 2, 129 (1976)

18)実大廊下における火災気流の熱流動性状(I)

半田、浜田、須川、深谷、秋山

日本火災学会論文集、Vol. 26, No. 2, 1 (1976)

19)Effect of Impregnants Utilized in Fire-Retarded Wood-Polymer Composite.

T. Handa, T. Nagashima, A. Takahashi, Y. Seki, O. Nishida, N. Ebihara,
Proc. 21st. Jpn. Congr. Mat. Res. (1977)

20)T字型実廊下における火災気流の熱流動性状の実験研究

半田、浜田、須川、深谷、遠藤

日本火災学会論文集、Vol. 27, No. 1, 1 (1977)

21)Combustion Behaviour of Liquid Fuel in Small Vesel: Effect of Convective Motion in the Liquid on Burning Rate of Hexen in the Early stage of Combustion.

T. Yumoto, A. Takahashi, T. Handa, Combustion and Flame, 30, 33 (1977)

22)タンク上部部分燃焼における石油の燃焼性状

湯本、小堀、半田

安全工学、Vol. 19, No.5, 258 (1980)

23)二つのモデル石油タンク間の延焼におけるタンク高さの影響

湯本、小堀、半田

安全工学、Vol. 19, No.4, 195 (1980)

24)Size Determnination of Submicron Particulates by Optical Counter Using Laser and Characteristics of Smoke from Polymerized Materials.

T. Handa, K. Suda, T. Nagashima, K. Kaneko, T. Yamamura, Y. Takahashi, H. Suzuki,
Fire Research, 1, 225 (1977/78)

- 25) Characteristics of Smokes from Flame-Retarded Plastics on the Basis of the Size distribution of Particulates.
T. Handa, T. Nagashima, Y. Takahashi, K. Ebihara, F. Saito
Fire Research, 1, 265 (1977/78)
- 26) Performance Characteristics of Detector to Fire Products through Corridor and Compartment.
T. Handa, H. Fukaya, O. Sugawa, K. Kaneko, T. Hamada, Y. Furukawa, K. Endo,
Bull. Jpn. Assoc. Fire Sci. & Engi. Vol.28, No.2, 31 (1978)
- 27) 単室および廊下における初期火災火災時の火災感知器の動作物性
半田、浜田、深谷、須川、金子、古川、遠藤
日本火災学会論文集、 Vol. 28, No. 2, 11 (1978)
- 28) 実廊下における火災気流の熱流動性状(II)
半田、浜田、須川、秋山、金子
日本火災学会論文集、 Vol. 28, No. 2, 1 (1978)
- 29) The synergistic Behaviour of Antimony Trioxide in Endorsing the Performance of Halogen Containing Fire-Retardants in Polyolefins.
T. Handa, T. Nagashima, N. Ebihara,
Proc. 21st. Jpn. Congr. Mat. Res. 326 (1978)
- 30) Characterization of Smokes from Fire Retarded Plastics on Basis of the Size Distribution of Particulates.
T. Handa, T. Nagashima, Y. Takahashi, K. Suda, N. Ebihara, F. Saito
Fire Research, Vol.1, No.4-5, (1978)
- 31) Flame Retardancy and Physical Properties of Phenolic Laminates for Electric Appliance.
T. Handa, N. Ebihara, S. Fujieda, T. Nagashima, S. Yosizawa, M. Suzuki, Y. Takahashi,
Proc. 22nd. Congr. Mat. Res. 300 (1978)
- 32) Pt and Sb profiles in the Sintered SnO_2 -Pt-Sb $_2$ O $_3$ System and their Effect on I-V Characteristics.
T. Handa, H. Fukaya, T. Maruyama, K. Hoshino, K. Endo, Y. Okayama,
Proc. 22nd. Jpn. Congr. Mat. Res. 326 (1979)
- 33) Motion of Fire Products in High Ceiling Enclosure,
T. Handa, O. Sugawa, A. Watanabe
Fire Safety in Buildings P. III-29 (1979)
- 34) Augmented Cooperativeity Between Halogen and Phosphorus in the Fire-Retardant-Phenol-Wood.
T. Handa, T. Nagashima, Y. Takahashi,
Proc. 22nd. Jpn. Congr. Mat. Res. 306 (1979)
- 35) Synergistic Action of Sb $_2$ O $_3$ with Bromine-containing Flame Retardant in Polyolefins. 1-The Variance in their Performance Versus Sb/Br ratio.
T. Handa, T. Nagashima, N. Ebihara,
Fire and Research, Vol.3, No.2, 306 (1979)
- 36) フェノールWPCの難燃性および発煙性に及ぼすTHPCおよびNH $_4$ Brの複合効果
半田、長嶋、高橋
木材学会誌、 Vol.25 No.9, 600 (1979)

- 37) Change of Smoke particles Size and Elimination of Smoke by Corona.
K. Kaneko, T. Handa, K. Suda,
CIB Symp. Syst. App. to Fire Safety in Buildings P. III-45 (1979)
- 38) Portable Optical Particle ($0.06\ \mu\text{m}$) Counter.
K. Suda, T. Handa,
Rev. Sci. Instrum., 50, 831 (1979)
- 39) Measurement of Suspended Particle in Atmosphere by Optical Particle Counter,
T. Handa, K. Suda, Y. Kato, T. Yamamura
Trans. Soc. Instrum. And Control Engin., 15, 792 (1979)
- 40) Instrumentation for the Size Determination of Submicron Particulates Systems by Sideway Light
Scattering Method and the Characteristics of Smokes from Polymerized Materials in Fire.
T. Handa, K. Suda, T. Nagashima, K. Kaneko, T. Yamamura, Y. Takahashi, H. Suzuki, F. Saito
Fire Research and Safety, 540 (1979)
- 41) The Current-Voltage Characteristics of Pt-SnO₂ Point-Contact.
T. Handa, H. Fukaya, K. Kojima, K. Endo, Y. Okayama
Proc. 23rd. Jpn. Congr. Mat. Res. 220 (1980)
- 42) Dispersibility of Flame Retardants and their Effects on Mechanical Properties of Flame Retarding
Polypropylene.
T. Handa, N. Ebihara, S. Fujieda, M. Koishi
SHIKIZAI KYOKAISHI, Vol. 53 [12] 704 (1980)
- 43) The Synergistic Effects of Sb₂O₃ and Other Metal Oxide or Hydroxide in Flame Retardant
Polypropylene and Soft PVC.
T. Handa, N. Ebihara, T. Nagashima, H. Yamamoto, H. Tsushima,
Proc. of the Int'l. Conf. on Electrical and Electronic Materials, Millbrae, USA, Vol. 1, 75 (1980)
- 44) Effect of Mechanical Structure on the Combustion Behaviour in the Phenol-Fire Retardants-WPC.
T. Handa, S. Yoshizawa, T. Nagashima, H. Tsushima, H. Yamamoto, N. Ebihara,
Proc. 23rd. Jpn. Congr. Mat. Res. 333 (1980)
- 45) Flame Retardant Paper Base Phenol Laminate for Household Electric Appliance
T. Handa, N. Ebihara, S. Yoshizawa, T. Nagashima, H. Yamamoto,
Proc. Int'l Conf. on Electrical and Electronic Materials, Millbrae, USA. Vol. 1, 19 (1980)
- 46) Effect of Oxygen Partial Pressure on the Combustion of Organic Materials in the Hot wire Ignition Test
T. Handa, T. Nagashima, H. Yamamoto, H. Tsushima, S. Miyanishi, N. Ebihara,
Proc. 23rd. Jpn. Congr. Mat. Res. 327 (1980)
- 47) Current-Voltage Characteristics of Pt Dispersed SnO₂ Ceramics.
T. Handa, H. Fukaya, K. Kojima, K. Endo, Y. Okayama
Proc. 24th. Jpn. Congr. Mat. Res. 223 (1980)
- 48) The Synergistic Effect of Sb₂O₃ and other Metal Oxide or Hydroxide in Plasticized Flame Retardant
Polypropylene and plasticized PVC.
T. Handa, T. Nagashima, H. Yamamoto, S. Miyanishi, N. Ebihara, S. Orihashi,
J. Fire retardant Chem., Vol. 8 171 (1981)

- 49) Flammability and Solder Resistance of Flame Retardant Paper-Base Phenolic Laminate.
N. Ebihara, T. Handa,
J. Society of Materials Science Vol. 30 No. 336, 936 (1981)
- 50) Flow Behaviour of Plume from Growing Fire Source in High Ceiling Enclosure.
T. Handa,
J. of Fire & Flammability, 12, 31, Jpn. (1981)
- 51) 実大廊下における火気気流の熱流動性状 (Part III) 水平熱流動性状の会席
半田、浜田
日本火災学会論文集、 31、 (1981))
- 52) Smoke Filling in an Enclosure.
G. Mulholland, T. Handa, O. Sugawa, H. Yamamoto,
Fire Science and Technology, Vol. 1 No. 1 (1981)
- 53) Characterization of Flow behaviour of Hot fire Products in a Concrete Full-Scale Corridor.
T. Handa, O. Sugawa,
Fire Science and Technology, 1, 45 (1981)
- 54) Computer Simulation of the Motion of Heat Flow Induced by the Fire in the Long-Scale Tunnel.
T. Handa, K. Hayashi, T. Ishii, M. Morita,
Fire Science and Technology Vol. 1, No.1 91 (1981)
- 55) 塩素系難燃剤 (デクロラン) 及び三酸化アンチモンによるポリプロピレンの難燃性状
半田、海原、長嶋
色材協会誌、 54 193 (1981)
- 56) Synergistic Action of Sb_2O_3 with Bromine-Containing Flame Retardant in Polyolefins.
II Structure-Effect Relationships in Flame Retardant Systems.
T. Handa, T. Nagashima, N. Ebihara,
J. Fire retardant Chem., Vol. 8 37 (1981)
- 57) タンク本体が大きい場合のタンク上部部分燃焼における石油の燃焼性状
湯本、小堀、古積、半田
- 58) Effect of Tank Height on Fire Spread between Two Model Oil Tanks.
M. Kobori, T. Handa, T. Yumoto,
J. Fire & Flammability, Vol. 12 157 (1981)
- 59) 難燃性ポリプロピレンにおける難燃剤の分散性とその機械的強度におよぼす影響
半田、小石
色材協会誌、 54 704 (1980)
- 60) An Example of Human Behaviour in a Hotel Fire.
S. Okishio, T. Handa,
Fire Science and Technology Vol. 3, No.2 131 (1983)
- 61) Computer Simulation of Oxidative Pyrolysis of Wood.
T. Handa, K. Hayashi, T. Ishii, M. Morita,
Fire Science and Technology Vol. 2, No.2 109 (1982)

62) Synergistic Action of Sb_2O_3 with Bromine-Containing Flame Retardant in Polyolefins.

III The Relationship Between certain Combustion Variables.

T. Handa, T. Nagashima, N. Ebihara,

Fire and Materials, vol. 6, No. 1, 1 (1982)

63) Thermal Processes in Smoldering Wood.

T. Handa, S. Yoshizawa, M. Morita, M. Fukuoka, H. Tsushima, Y. Hashizume, T. Nakamura,

Fire Research and Safety, No. 639, 308 (1982)

64) Flammability and Smoke Property of Phenolic Laminate.

T. Handa, N. Ebihara, S. Yoshizawa, Y. Hashizume,

Fire Science and Technology Vol. 2, No. 2, 99 (1982)

65) Turning Process of Glowing Plume from an Unsteady Fire Source in an Enclosure.

T. Handa,

J. of Fire & Flammability, 13, 3, (1982)

66) Calcination Temperature effects to CO-Gas Sensor of Pt-Dispersed Hydrous SnO_2 Gel.

T. Handa, H. Fukuoka, O. Sugawa, Y. Terasawa, K. Endoh, Y. Okayama

Fire Science and Technology Vol. 3, No. 1, 1 (1983)

67) Characteristics for CO Gas Sensor of Hydrous SnO_2 Gel with Pt Dispersion in Wet Air

T. Handa, H. Fukaya, Y. Terasawa, Y. Okayama,

Proc. 3rd. Sympo. "The Bases and Application of sensor" (1983)

68) Characteristics of CO-Gas sensor of Pt and Sb dispersed SnO_2 Ceramics.

Y. Okayama, H. Fukaya, K. Kojima, Y. Terasawa, T. Handa,

Proc. Int'l Meetin of the Chemical sensor (1983)

69) Computer Simulation of the Spontaneous Combustion of Coal storage.

T. Handa, K. Hayashi, T. Ishii, M. Morita

Fire Science and Technology Vol. 3, No. 1, 13 (1983)

70) Using the Harvard Fire Simulation

J.A. Rookett, M. Morita, T. Handa

Fire Science and Technology Vol. 3, No. 1, 57 (1983)

71) Some Examples of application of Harvard V Fire Computer Code to Fire Investigation.

T. Handa, M. Morita, J.A. Rookett, O. Sugawa, K. Hayashi

Fire Science and Technology Vol. 3, No. 1, 57 (1983)

72) Flame Retardation Mechanism of Polypropylenes & Phenolic Laminates.

N. Ebara, T. Handa, H. Yamamoto, T. Nagashima,

Fire Science and Technology Vol. 3, No. 1, 25 (1983)

73) Numerical Simulation of Early Stage of a Compartment Fire.

T. Handa, K. Kawagoe, T. Yoshikawa, J. Mashige, T. Joh,

Fire Science and Technology Vol. 4, No. 2 (1984)