

## Publications in Refereed Journals

### Brožek, V. - Hrabovský, M. - Kopecký, V.

Decomposition of polyhydrogenide hydrocarbons in plasma jet generated by water stabilized plasma torch.

*High Temperature Material Processes An International Journal*, **3**, 375-384 (1999).

Grant: GA ČR(CZ) GA102/98/0813

[Impact factor: 0.076(99) 0.151(00) 0.342(01) 0,225(02)]

### Hrabovský, M.

Preface-plenary and topical lectures presented at the 14th ISPC.

*Pure and Applied Chemistry*, **71** [10] iv (1999).

[International Symposium on Plasma Chemistry /14./. Prague (CZ), 99.08.02-99.08.06 (WRD)]

[Impact factor:1.308(91) 1.739(92) 1.323(93) 1.403(94) 1.495(95) 1.630(96) 1.971(97) 1.677(98) 1.141(99) 1.257(00) 1.535(01) 1,750(02)]

### Jeništa, J.

Water-vortex stabilized electric arc.Part I:Numerical model.

*Journal of Physics D. D:Applied Physics*, **32** [21] 2763-2776 ( 1999).

Grant: GA ČR(CZ) GV106/96/K245; GA ČR(CZ) GA102/98/0813; GA AV ČR (CZ) IAA1043804; GA AV ČR(CZ) KSK1043601

[Impact factor: 1.100(96) 1.090(97) 1.100(98) 1.188(99) 1.179(00) 1.260(01) 1,366(02)]

### Jeništa, J.

Water-vortex stabilized electric arc.Part II:Effect of non-uniform evaporation of water.

*Journal of Physics D. D:Applied Physics*, **32** [21] 2777-2784 ( 1999).

Grant: GA AV ČR(CZ) KSK1043601; GA ČR(CZ) GV106/96/K245; GA ČR(CZ) GA102/98/0813; GA AV ČR(CZ) IAA1043804

[Impact factor: 1.100(96) 1.090(97) 1.100(98) 1.188(99) 1.179(00) 1.260(01) 1,366(02)]

## Publications in Proceedings of International Conferences

### Brožek, V. - Boháč, P. - Gaukler, L. - Paul, W. - Chráska, P.

Sealing of MgO and CrO Plasma Sprayed Substrates.

In: *METAL 99 - 8. mezinárodní metalurgický veletrh a symposium*. - Ostrava, TANGER, s.r.o., Ostrava 1999. - S. 266-272. - ( 3).

[METAL 99 - mezinárodní metalurgický veletrh a symposium /8./. Ostrava (CZ), 99.05.11-99.05.13]

### Brožek, V. - Dufek, V. - Neufuss, K.

Adhesion improvement of plasma sprayed ceramic coatings on steel through boronizing.

In: *Proceedings of the United Thermal Spray Conference & Exposition*. - (Ed. Lugscheider, E.; Kammer, P.A.). - Düsseldorf, DSV Verlag, Düsseldorf 1999. - S. 208-212.

[Thermal Spray Conference UTSC '99.. Düsseldorf (DE), 99.03.17-99.03.19 (WRD)]

### Brožek, V. - Špirková, L. - Chráska, P.

Regulace porovitosti hořečnaté keramiky pro supravodiče.

In: *Zborník príspevkov: 51. zjazd chemických spoločností.* - (Ed. Uher, M.). - Bratislava, STU Bratislava 1999. - S. B-PO 32/1-2.

[Zjazd chemických spoločností/51./, Nitra (SK), 99.09.06-99.09.09 ( EUR)]

Grant: GA ČR(CZ) GA106/97/S008; GA AV ČR(XC) Projekt Eureka 1543 SUBSTR

**Hrabovský, M.**

Generation of thermal plasmas in torches with liquid stabilized arcs.

In: *2nd International Symposium on Heat and Mass Transfer under Plasma Conditions, Book of Abstracts.* - (Ed. Fauchais, P.). - -, ICHMT 1999. - S. 8-9.

[International Symposium on Heat and Mass Transfer under Plasma Conditions/2nd./,

Tekirova, Antalya (TR), 99.04.19-99.04.23]

**Hrabovský, M. - Konrád, M. - Kopecký, V.**

Measurements of velocity of individual particles injected into oxygen-hydrogen plasma jet. (Ed. Fauchais, P.; Amouroux, J.). - New York, Begell House, Inc. 1999. - 6 s.

[International Thermal Plasma Processing Conference /5./, St.Petersburg (RU), 98.07.13-98.07.16]

Grant: GA ČR(CZ) GA102/98/0813; GA AV ČR(CZ) IAA1043804

**Hrabovský, M. - Konrád, M. - Kopecký, V.**

Investigation of structure of turbulent boundary layer between thermal plasma jet and ambient air. (Ed. Fauchais, P.; Amouroux, J.). - New York, Begell House, Inc. 1999. - 6 s.

[International Thermal Plasma Processing Conference /5./, St. Petersburg (RU), 98.07.13-98.07.16]

Grant: GA ČR(CZ) GA106/96/K245; GA AV ČR(CZ) IAA1043804

**Hrabovský, M. - Konrád, M. - Kopecký, V. - Sember, V.**

Effect of anode attachment on flow structure of plasma jet generated in water stabilized torch.

In: *2nd International Symposium on Heat and Mass Transfer under Plasma Conditions, Book of Abstracts.* - (Ed. Fauchais, P.). - -, International Centre for Heat and Mass Transfer, ICHMT 1999. - S. 114+0.

[International Symposium on Heat and Mass Transfer under Plasma Conditions/2nd./,

Tekirova, Antalya (TR), 99.04.19-99.04.23]

**Hrabovský, M. - Konrád, M. - Kopecký, V. - Sember, V.**

Properties of Electric Arc Stabilized by Mixture of Water with Ethanol.

In: *2nd International Symposium on Heat and Mass Transfer under Plasma Conditions, Book of Abstracts.* - (Ed. Fauchais, P.). - -, International Centre for Heat and Mass Transfer, ICHMT 1999. - S. 111-113.

[International Symposium on Heat and Mass Transfer under Plasma Conditions/2nd./,

Tekirova, Antalya (TR), 99.04.19-99.04.23]

Grant: GA ČR(CZ) GA106/96/K245,102/98/0813

**Hrabovský, M. - Konrád, M. - Kopecký, V.**

14th International Symposium on Plasma Chemistry Symposium Proceedings. (Ed.

Hrabovský, M.; Konrád, M.; Kopecký, V.). - 1.Prague, Institute of Plasma Physics AS CR 1999. - 2276 s.

[International Symposium on Plasma Chemistry /14./, Prague (CZ), 99.08.02-99.08.06]

**Hrabovský, M. - Konrád, M. - Kopecký, V. - Sember, V.**

Effect of addition of ethanol in to stabilizing liquid of water plasma torch on plasma jet characteristics for plasma spraying application.

In: *14th International Symposium on Plasma Chemistry-Symposium Proceedings*. - (Ed. Hrabovský, M.; Konrád, M.; Kopecký, V.). - 1. Prague, Institute of Plasma Physics AS CR 1999. - S. 2043-2048.

[International Symposium on Plasma Chemistry /14./. Prague (CZ), 99.08.02-99.08.06]

Grant: GA AV ČR(CZ) IAA1043808; GA ČR(CZ) GA102/98/0813

**Hrabovský, M. - Konrád, M. - Kopecký, V. - Sember, V.**

Effect of Anode Attachment on Flow Structure in Plasma Jet Generated in DC Arc Torch.

(Ed. Fauchais, P.; van der Mullen, J.; Heberlein, J.). - New York, The New York Academy of Sciences 1999. - 8 s. - (Annals of the New York Academy of Sciences. 8).

Grant: GA ČR(CZ) GV106/96/K245; GA ČR(CZ) GA102/98/0813

**Hrabovský, M. - Konrád, M. - Kopecký, V. - Sember, V.**

Properties of Electric Arc Stabilized by Mixture of Water with Ethanol. (Ed. Fauchais, P.; van der Mullen, J.; Heberlein, J.). - New York, The New York Academy of Sciences 1999. - 7 s. - (Annals of the New York Academy of Sciences. 891).

Grant: GA ČR(CZ) GV106/96/K245; GA ČR(CZ) GA102/98/0813

**Hrabovský, M. - Konrád, M. - Kopecký, V.**

Characteristics of Turbulence in the Boundary Layer Between a Plasma Jet and an Ambient Gas Investigated by Electric Probes. (Ed. Fauchais, P.; van der Mullen, J.; Heberlein, J.). - New York, The New York Academy of Sciences 1999. - 8 s. - (Annals of the New York Academy of Sciences. 89).

Grant: GA AV ČR(CZ) IAA1043804; GA ČR(CZ) GA102/98/0813

**Jeništa, J.**

Modeling of Fluid, Thermal and Electric Quantities Characterizing a Water-Swirl Stabilized Electric Arc. (Ed. Fauchais, P.; Amouroux, J.). - New York, Begell House, Inc. 1999. - 8 s. [International Thermal Plasma Processing Conference /5./. St.Petersburg (RU), 98.07.13-98.07.16]

Grant: GA ČR(CZ) GA102/98/0813; GA AV ČR(CZ) KSK1043601

**Jeništa, J.**

The effect of absorption of radiation within the discharge region of a water-vortex stabilized electric arc.

In: *14th International Symposium on plasma chemistry.Symposium Proceedings*. - (Ed. Hrabovský, M.; Konrád, M.; Kopecký, V.). - 1. Prague, Institute of Plasma Physics AS CR 1999. - S. 281-286.

[International Symposium on Plasma Chemistry /14./. Prague (CZ), 99.08.02-99.08.06]

Grant: GA ČR(CZ) GV106/96/K245; GA AV ČR(CZ) KSK1043601; GA ČR(CZ) GA102/98/0813; GA AV ČR(CZ) IAA1043804

**Jeništa, J. - Gonzalez, J. J.**

On behaviour of a water-swirl stabilized electric arc under different operational regimes.

In: *14th International Symposium on Plasma Chemistry.Symposium Proceedings*. - (Ed. Hrabovský, M.; Konrád, M.; Kopecký, V.). - 1. Prague, Institute of Plasma Physics AS CR

1999. - S. 355-360.

[International Symposium on Plasma Chemistry /14./. Prague (CZ), 99.08.02-99.08.06]

Grant: GA ČR(CZ) IAC1043601; GA ČR(CZ) GA106/96/K245; GA ČR(CZ)

GA102/98/0813; GA AV ČR(CZ) IAA1043804

**Jeništa, J. - Hrabovský, M. - Kopecký, V.**

Effect of Vortex Motion of Stabilizing Liquid Wall on Properties of Arc in Water Plasma Torch.

*Annals of the New York Academy of Sciences*, **891**, [-] 64-71 ( 1999).

[ (US)]

Grant: GA ČR(CZ) GV106/96/K245; GA ČR(CZ) GA102/98/0813

**Jeništa, J. - Kopecký, V. - Hrabovský, M.**

Effect of vortex motion of stabilizing liquid wall on properties of arc in water plasma torch.

In: *2nd International Symposium on Heat and Mass Transfer under Plasma Conditions. Book of Abstracts*. - (Ed. Fauchais, P.). - Limoges, University of Limoges, France 1999. - S. 132-134.

[International Symposium on Heat and Mass Transfer under Plasma Conditions /2./. Tekirova (TR), 99.04.19-99.04.23]

Grant: GA ČR(CZ) GA106/96/K245; GA AV ČR(CZ) IAC1043601; GA ČR(CZ)

GA102/98/0813; GA AV ČR(CZ) IAA1043804

**Jeništa, J. - Sember, V. - Kotalík, P.**

Study of non-LTE effects in thermal plasma water jet by means of optical emission spectroscopy and numerical modeling.

In: *14th International Symposium on Plasma Chemistry. Symposium Proceedings*. - (Ed. Hrabovský, M.; Konrád, M.; Kopecký, V.). - 1. Prague, Institute of Plasma Physics 1999. - S. 2815-2819.

[International Symposium on Plasma Chemistry /14./. Prague (CZ), 99.08.02-99.08.06]

Grant: GA ČR(CZ) GV106/96/K245; GA ČR(CZ) GA102/98/0813; GA AV ČR (CZ)

IAA1043804; GA AV ČR(CZ) KSK1043601

**Jeništa, J. - Sember, V. - Kotalík, P.**

On diagnostics and modeling of non-LTE effects in thermal water plasma jet.

In: *2nd International Symposium on Heat and Mass Transfer under Plasma Conditions. Book of Abstracts*. - (Ed. Fauchais, P.). - Limoges, University of Limoges, France 1999. - S. 108-110.

[International Symposium on Heat and Mass Transfer under Plasma Conditions /2./. Tekirova (TR), 99.04.19-99.04.23]

Grant: GA ČR(CZ) GA106/96/K245; GA ČR(CZ) GA102/98/0813; GA AV ČR (CZ)

IAA1043804; GA AV ČR(CZ) KSK1043601

**Kopecký, V. - Hrabovský, M. - Konrád, M.**

Characteristics of turbulence of the boundary layer between plasma jet and ambient gas investigated by electric probes.

In: *2nd International Symposium on Heat and Mass Transfer under Plasma Conditions, Book of Abstracts*. - (Ed. Fauchais, P.). - -, International Centre for Heat and Mass Transfer, ICHMT 1999. - S. 89-91.

[International Symposium on Heat and Mass Transfer under Plasma Conditions/2nd./.

Tekirova, Antalya (TR), 99.04.19-99.04.23]

Grant: GA ČR(CZ) GA102/98/0813; GA AV ČR(CZ) IAA1043804

**Kotalík, P.**

Modelling of Water Stabilized Plasma Torch.

In: *14th International Symposium on Plasma Chemistry, Symposium Proceedings.* - (Ed. Hrabovský, M.; Konrád, M.; Kopecký, V.). - Prague, LOC of the ISPC-14 1999. - S. 397-402.

[International Symposium on Plasma Chemistry /14./. Prague (CZ), 99.08.02-99.08.06]

Grant: GA ČR(CZ) GV106/96/K245; GA ČR(CZ) GA102/98/0813

**Neufuss, K. - Dubský, J. - Kolman, B. - Chráska, P. - Brožek, V. - Boháč, P.**

APS Spraying of MgO and CeO<sub>2</sub> with WSP.

In: *Proceedings of the 14th International Symposium on Plasma Chemistry.* - (Ed. Hrabovský, M.; Konrád, M.; Kopecký, V.). - Prague, Institute of Plasma Physics 1999. - S. 2075-2079. - (4).

[International Symposium on Plasma Chemistry/14th./. Prague (CZ), 99.08.02-99.08.06 (WRD)]

Grant: GA ČR(CZ) GA106/97/S008; GA MŠk(CZ) OE16a/EU1543

**Sember, V. - Koláček, K. - Řípa, M. - Kopecký, V. - Hrabovský, M.**

Mixing and entrainment of cold gas into thermal plasma Jet generated in water plasma torch. (Ed. Fauchais, P.; Amouroux, J.). - New York, Begell House, Inc. 1999. - 6 s.

[International Thermal Plasma Processing /5./. St.Petersburg (RU), 98.07.13-98.07.16]

Grant: GA ČR(CZ) GA106/96/K245,102/98/0813,AV K1043601/97

**Shin, K. H. - Lee, D. Y. - Brožek, V. - Hrabovský, M. - Chráska, P. - Kopecký, V.**

Reduction of Fe<sub>2</sub>O<sub>3</sub> by hydrogen using water plasma torch.

In: *14th International Symposium on Plasma Chemistry-Symposium Proceedings.* - (Ed. Hrabovský, M.; Konrád, M.; Kopecký, V.). - 1. Prague, Institute of Plasma Physics AS CR 1999. - S. 2803-2807.

[International Symposium on Plasma Chemistry /14./. Prague (CZ), 99.08.02-99.08.06]

**Špírková, L. - Brožek, V. - Chráska, P. - Durand, J.**

Keramické membrány připravené žárovou plazmovou depozicí.

In: *Proceedings of the 51st Chemical Society Conference.* - (Ed. Uher, M.). - Bratislava, STU Bratislava 1999. - S. B-PO 33/1-2.

[Zjazd chemických spoločností/51./. Nitra (SK), 99.09.06-99.09.09 (EUR)]

**Špírková, L. - Brožek, V. - Chráska, P. - Durand, J.**

Properties of Plasma-sprayed Ceramics Membranes.

In: *Proceedings CHISA '99.* - (Ed. Pešinová, E.; Tvrđíková, A.). - -, - 1999. - S. 107.

[CHISA '99.. Srní (CZ), 99.10.18-99.10.21 (EUR)]

## **Proceedings of International Conferences**

**Boulos, M. I. - Fauchais, P. - Heberlein, J. - Hrabovský, M. - Pfender, M.**

Thermal Plasma Technology. (Ed. Boulos, M.). - Prague, IUPAC 1999. - 939 s.