

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE		3. REPORT TYPE AND DATES COVERED
		23 February 2000		Conference Proceedings
4. TITLE AND SUBTITLE			5. FUNDING NUMBERS	
International Conference on Energetic Materials			F61775-99-WF074	
6. AUTHOR(S)				
Conference Committee				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)			8. PERFORMING ORGANIZATION REPORT NUMBER	
Fraunhofer Institute for Chemical Technology Joseph-von-Fraunhofer-Strabe 7 Pfinztal 76318 Germany			N/A	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
EOARD PSC 802 BOX 14 FPO 09499-0200			CSP 99-5074	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION/AVAILABILITY STATEMENT			12b. DISTRIBUTION CODE	
Approved for public release; distribution is unlimited.			A	
13. ABSTRACT (Maximum 200 words)				
The Final Proceedings for International Conference on Energetic Materials, 29 June 1999 - 2 July 1999 This is an interdisciplinary conference. Topics include Components; Particle Technology; Synthesis, Production and Processing; Characterization of Energetic Materials; Safety Technology; Quality Assurance and Environmental Aspects.				
14. SUBJECT TERMS			15. NUMBER OF PAGES	
EOARD, Explosive Devices, Energetic Materials, Propellants				
			16. PRICE CODE	
			N/A	
17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT	
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UL	

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18
298-102

DTIC QUALITY INSPECTED 4

20000913 070

DTIC QUALITY INSPECTED 4



Fraunhofer Institut
Chemische Technologie

Fraunhofer ICT Postfach 12 40 D-76318 Pfinztal (Berghausen)

European Office of Aerospace Research
and Development
Attn. Dr. Charbel N. Raffoul
223 Old Marylebone Road
London NW1 5TH
ENGLAND

Institutsleiter
Prof. Dr.-Ing. Peter Eyerer

Joseph-von-Fraunhofer-Straße 7
D-76327 Pfinztal (Berghausen)

Telefon +49 (0) 7 21/46 40-0
Telefax +49 (0) 7 21/46 40-111

Pfinztal, 31.3.1999

Dear Dr. Raffoul,

we are organizing an International Conference on

„Energetic Materials “

from June 29 to July 2, 1999 in Karlsruhe, Germany.

The main topics of this Conference will be:

- Modeling of Phenomena
- Experimental Characterization
- Environmental Engineering

We are enclosing a preliminary program of the Conference. You will see that we have 96 contributions:

14 from USA:

No. 1, 38, 85: NSWC Indian Head

No. 57-60: Naval Research Laboratory

No. 41: ARDEC, Picatinny

24 from Russia

14 from Germany,

8 from UK (GB)

6 from France

6 from China

5 from The Netherlands

2 from Spain

1 from Portugal

44 from other countries

AQ F00-12-3869

THIS QUALITY INSPECTED

Vorstand der Fraunhofer-Gesellschaft:
Prof. Dr.-Ing. Dr. h. c. mult.
Hans-Jürgen Warnecke, Präsident
Dr. jur. Dirk-Meints Polter
Dr. rer. pol. Hans-Ulrich Wiese

Fraunhofer-Gesellschaft zur Förderung
der angewandten Forschung e.V., München

Bankverbindung: Deutsche Bank, München
Konto 7521933 BLZ 700 700 10

We also enclose an estimation of the costs of the Conference and would appreciate it if you could give us a contribution.

Sincerely yours,


(Dr. Fred Volk)

Enclos.:

- Announcement and Call for Paper
- Preliminary program
- Estimation of the costs

Sources of Income for the Conference

	DM	\$
a) Contributions by non-conference agencies	-	-
b) Registration fees of attendees including proceedings and conference literature	240000.-	133332.-
c) Special fees	-	-
d) Conference literature: DM 150.- / exemplar	-	-
e) Financial support from US Army	4000.-	2222.-
f) Financial support requested from US Air Force	4000.-	2222.-
g) Financial support requested from Navy	4000.-	2222.-
h) The difference will be regulated by our Institute	8000.-	4444.-
	260000.-	144442.-

cost1.doc

Estimation of the costs of the Conference

	DM	\$
a) Rental fees for Meeting rooms	78000.-	43333.-
b) Wages / salaries of personnel	26000.-	14444.-
c) Subsidies for attendees fee of invited attendees	35000.-	19444.-
d) Subsidies for living quarters for attendees	8000.-	4444.-
e) Subsidies for transport	2000.-	1111.-
f) Utilities, such as telephones	2000.-	1111.-
g) Mailing expenses	10000.-	5556.-
h) Editing and publication of Call for Papers	5000.-	2778.-
of final program	13000.-	7222.-
of Proceedings	55000.-	30555.-
i) Interpreters English-German ; German-English	26000.-	14444.-
	260000.-	144442.-

cost.doc

Preliminary program

1.

Energetic liquid azido nitramines

R.L. Simmons,

Naval Surface Warfare Center, Indian Head, USA

2.

Numerical modelling of the dependence of impact sensitivity on the properties of explosives

A.V. Dubovik,

Semenov Institute of Chemical Physics RAS, Moscow, RUSSIA

3.

Entwicklung eines Kombi-Treib-/Sprengstoffs für den Einsatz in low-cost
Unterwasserlaufkörpern

H.P. Hebekeuser, H.P. Mackowiak, R. Schöffl,

Dynamit Nobel GmbH, Burbach-Würgendorf, D

4.

Some relationships for explosion initiation in binary compositions oxidizer-fuel during the impact

V.A. Teselkin, A.V. Dubovik,

Semenov Institute of Chemical Physics RAS, Moscow, RUSSIA

5.

Effect of additives on the burning rate of solid fuel in the flow of gaseous oxygen

N.N. Bakhman,

Institute of Chemical Physics RAS, Moscow, RUSSIA

6.

Prüfmethode EMBLA zur Bestimmung der linearen Brenngeschwindigkeit von
Treibladungspulver

K. Kupzik, H. Niggemeyer, T. Barski,

WIWEB, Swisttal, D

7.

Wirkungsprediction hinsichtlich von IED/USBV auf die Umgebung und Gefahrobjekte

L. Lukacs,

Militäruniversität „Zrinyi Miklos“, Budapest, H

O. Mueller,

Budapest, H

8.

Indirekte Karl-Fischer-Titration - ein neuer Weg zur Bestimmung der Feuchtigkeit in
Explosivstoffen

Indirect Karl Fischer Titration - a new method to determine the moisture content of explosives

S. Wilker, G. Schiemann,

WIWEB, Swisttal-Heimerzheim, D

9.

The thermal decomposition of polyfunctional azidocompounds

R.S. Stepanov, L.A. Kruglyakova,
Siberian State Technological University, Krasnoyarsk, RUSSIA

10.

A quantitative approach for the determination of the age life of a pyrotechnic material in an airbag inflator

M.W. Barnes, C. Hock,
Autoliv ASP Inc., Ogden, USA

11.

Characterization of NTO-based pressed PBX-formulations

F.C. Fouche, H.C. Bezuidenhout, F.A. Venter,
Naschem, RSA
C.E. du Toit,
Somchem, RSA

12.

Procedure for selection of molecular structures of explosives having high performance

P. Vavra,
University of Pardubice, Pardubice, CZ

13.

Calculation of detonation heat by EXPLO5 computer code

M. Suceška,
Brodarski Institute, Zagreb, CROATIA

14.

Physics of Nitrozoamine combustion as a monopropellant and as an ingredient of modern propellants

A.A. Zenin, S.V. Finjakov, N.G. Ibragimov,
Semenov Institute of Chemical Physics RAS, Moscow, RUSSIA

15.

Comparison of two HTPB based composite propellants by dynamic mechanical analysis

A. Göcmez, M.Y. Özen, F. Pekel,
Defense Industries Research and Development Institute, Ankara, TR
S. Özkar,
Middle East Technical University, Ankara, TR

16.

To ultrafine diamond formation mechanism under detonation synthesis and its yield dependence on external conditions

A.Y. Babushkin, A.I. Lyamkin, G.A. Chiganova,
Krasnoyarsk State Technical University, Krasnoyarsk, RUSSIA

17.

Attractive soft-sphere equation of state

A.Y. Babushkin, A.I. Lyamkin,
Krasnoyarsk State Technical University, Krasnoyarsk, RUSSIA

18.

Interaction of Glycidyl azide polymer plasticizer with other polymers

A.P. Manzara, R.W. Hunter,
3M Chemicals Division, St. Paul, USA

19.

Modelling experiments of penetration into cased materials

D. Davis, W. Huntington-Thresher, A. Kosecki, P.D. Church, D.C. Mullenger,
DERA Fort Halstead, Sevenoaks, GB

20.

Mechanical properties of a porous material studied in a high speed piston driven compaction experiment

J.F. Moxnes,
FFI, Kjeller, N
G. Odegardstuen,
Nammo Raufoss AS, Raufoss, N
A. Atwood, P. Curran,
Naval Air Warfare Center Weapons Division, China Lake, USA

21.

Improvement of Hydrazinium Nitroformate product characteristics

M.I. Rodgers,
ICI Nobel Enterprises, Stevenston, GB
A.E.D.M. van der Heijden,
TNO-PML, Rijswijk, NL
W.H.M. Veltmans,
Aerospace Propulsion Products bv, Bergen op Zoom, NL

22.

The ICT-Thermochemical Database

H. Bathelt, F. Volk, M. Weindel,
Fraunhofer ICT, Pfinztal, D

23.

Triazolyl-1,2,5-oxadiazoles - a new class of energetic compounds

L.V. Batog, V.Y. Rozhkov, L.S. Konstantinova, A.N. Blinnikov, N.N. Makhova, T.S. Pivina,
N.D. Zelinsky Institute of Organic Chemistry RAS, Moscow, RUSSIA

24.

4-amino-3-azidocarbonylfuroxan as an universal synton for the synthesis of high energetic compounds of furoxan series

N.N. Makhova, A.S. Kulikov, I.V. Ovchinnikov, T.S. Pivina,
N.D. Zelinsky Institute of Organic Chemistry RAS, Moscow, RUSSIA

25.

Role of chain reactions at thermal decomposition of RDX in solution

Y. Shu, V.V. Dubikhin, G.M. Nazin, G.B. Manelis,
Institute of Chemical Physics RAS, Chernogolovka, RUSSIA

26.

Ab initio study of mechanism of gas-phase monomolecular destruction of Nitroethylene

A.G. Shamov, G.M. Khrapkovskii,
Kazan State Technological University, Kazan, RUSSIA

27.

Eco-friendliness in the production of high energy materials - a case study of HMX production

M.V. Rajopadhye, P.R. Hima, R.K. Syal,
High Energy Materials Research Laboratory, Pune, IND

28.

Unempfindliche Anzündmischungen für moderne Treibladungen

E. Rochat,
Oerlikon Contraves Defence Pyrotec AG, Studen, CH
B. Berger,
Gruppe Rüstung, Thun, CH

29.

Characterisation of thermal runaway reactions in energetic solid materials using accelerating rate calorimetry

P.F. Bunyan, D.A. Tod,
DERA Fort Halstead, Sevenoaks, GB

30.

Crystal growth rate and impurity effect during RDX crystallization

J.H. ter Horst,
Delft University of Technology, Delft, NL
R.M. Geertman,
Akzo Nobel Central Research, Arnhem, NL
A.E. van der Heijden, G.M. van Rosmalen,
TNO-PML, Rijswijk, NL

31.

Underwater explosion of aluminized emulsion explosives

Y. Kato, K. Takahashi, A. Torii, K. Kurokawa, H. Hattori,
NOF Corporation, Chita-gun Aichi, JAP

32.

Determination of the detonation energy and some of the energetic characteristics of various
NTO-based formulations

G.J. Ellis, H.C. Bezuidenhout,
NASCHEM, Potchefstroom, RSA

33.

Kinetics of thermal decomposition of Hexanitrohexaazaisowurtzitane

B. Korsounskii, V. Nedelko, N. Chukanov, T. Larikova,
Institute for Chemical Physics RAS, Chernogolovka, RUSSIA
F. Volk,
Fraunhofer ICT, Pfinztal, D

34.

Micro-inclusions in HMX crystals

A.E.D.M. van der Heijden, W. Duvalois, C.J.M. van der Wulp,
TNO-PML, Rijswijk, NL

35.

Some peculiarities of the alkaline hydrolysis of Nitrocellulose

B. Lurie, V. Malchevski,
Mendeleev University of Chemical Technology, Moscow, RUSSIA

36.

An environmentally favorable continuous process for the synthesis of BDNPA/F

R.B. Wardle, R.S. Hamilton, M. Geslin, V. Mancini, D. Merrill,
Thiokol Propulsion, Brigham City, USA

37.

A fully recyclable oxetane TPE rocket propellant

R.B. Wardle, R.S. Hamilton, C. Hughes,
Thiokol Propulsion, Brigham City, USA

38.

Development of tough TPE gun propellants

P.C. Braithwaite, A. Sanderson, R.B. Wardle,
Thiokol Propulsion, Brigham City, USA
L.E. Harris, T. Manning, K. Klingaman,
US Army ARDEC, Picatinny Arsenal, USA
T. Stephens,
Naval Air Warfare Center, China Lake, USA
S. Prickett,
Naval Surface Warfare Center, Indian Head, USA

39.

A study of the laser ignition of HMX/carbon black compositions

S.G. Goveas, R.C. Drake,
AWE plc, Aldermaston, GB

40.

Non-uniformity of elementary unit composition of Cellulose nitrates and ion-molecular species of nitrating mixtures

V.I. Kovalenko,
Kazan State Technological University, Kazan, RUSSIA

41.

Performance and hazard characterization of CL-20 formulations

M. Mezger, S.M. Nicolich, D.A. Geiss Jr.,
US Army TACOM-ARDEC, Picatinny Arsenal, USA
R.L. Hatch, K.E. Lee,
Thiokol Corporation, USA

42.

Thermodynamic modeling of detonation of hydrazine-nitromethane-methanol liquid mixtures

S.B. Victorov, S.A. Gubin, I.V. Maklashova,
Moscow State Engineering Physics Institute, Moscow, RUSSIA

43.

End game logic of target coverage for anti tactical ballistic missile

L.-M. Chao,
Chung Shan Institute of Science and Technology, Lung-Tan Taiwan, ROC

44.

Distributed activation energy model for thermal decomposition kinetics of plastic bonded explosives

T.-F. Yeh,
Chung Cheng Institute of Technology, Taoyuan Taiwan, ROC

45.

Dynamisch mechanische Eigenschaften schnellbrennender rauchreduzierter Festtreibstoffe

P. Gerber, S. Eisele, K. Menke,
Fraunhofer ICT, Pfinztal, D

46.

Modelling and experimental evidence of mechanical stresses and analytical determination of ferrocene migration for an end burning propellant grain

K. Menke, E. Geißler, G. Bunte,
Fraunhofer ICT, Pfinztal, D
H. Kentgens, R. Schöffl,
Dynamit Nobel Explosivstoff und Systemtechnik GmbH, D

47.

Sensitivity and thermal analysis of MTV igniter composition

V.S. Bhingarkar, H.J. Gandhi, P.A. Phawade, H. Singh,
High Energy Materials Research Laboratory, Pune, IND

48.

Results of TNT destruction by electrochemical way

M.E. Rabanal, M.A. Martinez,
Universidad Carlos III de Madrid, Leganes, E
A.J. Criado,
Universidad Complutense de Madrid, Madrid, E
N. Braojos, A. Perez de Diego,
Laboratorio Químico Central de Armamento, San Martin de la Vega, E

49.

Biochemical treatment of industrial waste waters from ammonium perchlorates and chlorates

M. Gaudre, J.M. Tauzia,
SNPE, Saint Medard en Jalles, F

50.

Pyrolysis and self-heating characterizations to predict the munitions responses to slow cook-off

Y. Guengant, D. Houdusse, B. Briquet,
SNPE-CRB, Vert le Petit, F

51.

From gun propellant to space launchers, the challenges of internal aerodynamics at SNPE

J.F. Guery, B. Gondouin, C. Reynaud,
SNPE-CRB, Vert le Petit, F

52.

Progress in determining the burning rate of a composite solid propellant using an ultrasound technique

F. Cauty, C. Erades,
ONERA, Chatillon Cedex, F

53.

Azetidine and its mono-, di- and trinitro-substituted derivatives: Computer modeling of decomposition reactions

T.S. Pivina, D.E. Lushnikov,
N.D. Zelinsky Institute of Organic Chemistry RAS, Moscow, RUSSIA
A.A. Porollo, T.V. Petukhova, V.P. Ivshin,
Mari State University, Yoshkar-Ola, RUSSIA

54.

The enthalpy of formation study of nitrate and perchlorate salts

Y.N. Matyushin, T.S. Konkova, L.M. Kostikova,

Semenov Institute of Chemical Physics RAS, Moscow, RUSSIA

T.S. Pivina,

Zelinsky Institute of Organic Chemistry RAS, Moscow, RUSSIA

V.A. Palyulin, I.I. Baskin,

Lomonosov State University, Moscow, RUSSIA

55.

Thermochemical properties and quantum-chemical parameters of benzofuroxans and benzofurazans derivatives

Y.N. Matyushin, V.I. Pepekin, V.P. Lebedev, V.V. Chironov, L.M. Kostikova, Y.O. Inozemtsev,
Semenov Institute of Chemical Physics RAS, Moscow, RUSSIA

T.S. Pivina,

Zelinsky Institute of Organic Chemistry RAS, Moscow, RUSSIA

56.

Comparativ studying combustion of composite propellants containing ultra fine aluminum

V.N. Simonenko, V.E. Zarko,

Institute of Chemical Kinetics and Combustion, Novosibirsk, RUSSIA

57.

Teflon and Teflon/Al (nanocrystalline) decomposition chemistry at high pressures

L.J. Parker, H. D. Ladouceur, T.P. Russell,

Naval Research Laboratory, Washington, USA

58.

The laser-induced reaction chemistry and kinetics of ammonium perchlorate at static high pressures

G.I. Pangilinan, T.P. Russell,

Naval Research Laboratory, Washington, USA

59.

Probing the deflagration/detonation chemistry of RDX

T.P. Russell, G.I. Pangilinan, D. Ladouceur,

Naval Research Laboratory, Washington, USA

60.

Ionization potentials of the decomposition products of TNAZ and RDX

N.L. Garland, S.W. McElvany,

Naval Research Laboratory, Washington, USA

61.

DMA solid propellant properties and the assesment of the service life of a rocket motor

E. de la Cruz, G. Jenaro,

Laboratorio Quimico Central de Armamento, Madrid, E

62.

Jet formation in cavity charges

M. Held,
TDW, Schrobenuhausen, D

63.
Blast-momentum of non-spherical unconfined HE-charges

M. Held, L. Chun,
TDW, Schrobenuhausen, D

64.
Bulk ageing effects in double base propellant

G.M. Kavanagh, D.A. Tod, R. White,
DERA Fort Halstead, Sevenoaks, GB

65.
The thermodynamic rules for evaluation of ignition temperature as applied to heterogeneous pyrotechnic composition

V.V. Klyucharev,
Institute of New Chemical Problems RAS, Chernogolovka, RUSSIA

66.
Shock initiation studies of composite gun propellants

D.F. Debenham, A.P. Kosecki,
DERA Fort Halstead, Sevenoaks, GB

67.
Supersonic combustion testing with laser optical diagnostics

U. Brummund,
DLR Lampoldshausen, Hardthausen, D
B. Mesnier,
Universite d'Orleans, F

68.
Determination of a detonation pressure from a water test

W.A. Trzcinski, S. Cudzilo, L. Szymanczyk,
Military University of Technology, Warsaw, PL

69.
Plasticised PolyGLYN binders for composite energetic materials

M.D. Cliff,
DSTO, Salisbury, AUS
A.V. Cunliffe,
DERA Fort Halstead, Sevenoaks, GB

70.
Characterisation of RDX and HMX surfaces using gas chromatography

S.A. Torry, A.V. Cunliffe, D. Tod,
DERA Fort Halstead, Sevenoaks, GB

71.

Untersuchung von Abbrandvorgängen am System Magnesium/Teflon/Viton (MTV) durch Emissionsspektroskopie

E.-C. Koch, A. Dochnahl,
Piepenbrock Pyrotechnik GmbH, Göllheim, D

72.

Study on the chemical properties of N100

Xiao An, Gan Xiao-Xian, Lu Xing-Seng,
Xian Modern Chemistry Research Institute, Xian, PRC

73.

The effect of heating rate on ignition temperature of energetic materials

P. Cardao,
University of Coimbra, Coimbra, P
J.C. Gois, J. Campos,
Inst. Polytechnics of Guarda, Guarda, P

74.

Study on ability of PPB strong igniting composition

Cheng Yi, Chen Shouwen, Wu Yajun, Zhu Hongfeng,
Nanjing University of Science and Technology, Nanjing, PRC

75.

Study on burning characteristic of NFA gas generant in different diameter and thickness

Bao Guogang, Chen Shouwen, Cheng Yi,
Nanjing University of Science and Technology, Nanjing, PRC

76.

ADN flame structure modeling

O.P. Korobeinichev, T.A. Bolshova, A.A. Paletsky,
Institute of Chemical Kinetics and Combustion RAS, Novosibirsk, RUSSIA

77.

Gasdynamics of filling and ignition of elastic stagnation zones of large-sized solid rocket motors

A.B. Vorozhtsov, S.S. Bondarchuk,
Tomsk State University, Tomsk, RUSSIA

78.

Rheological behaviour of a paste material

J.P. Faure, D. Picart,
CEA, Monts, F

79.

Characterisation of impurities in CL20

M. Kaiser, B. Ditz,
WIWEB, Swisttal-Heimerzheim, D

80.

Characterization of heat release process of energetic materials

N. Kubota,
Mitsubishi Electric Corp., Kamakura, JAP
I. Aoki,
Nissan Motor Co. Ltd., JAP

81.

The application of computer modelling to the assessment of safety and suitability for service of munitions

I.G. Wallace,
MOD, Bristol, GB

82.

Decomposition studies of production grade ammonium perchlorate and an ammonium perchlorate based solid rocket propellant

A.I. Atwood, P.O. Curran, K.J. Kraeutle, T.P. Parr, D. Hanson-Parr,
Naval Air Warfare Center Weapons Division, China Lake, USA

83.

Chemical kinetics at detonation of organic compounds - nitric acid mixtures

V.M. Raikova, A. Halak, B.N. Kondrikov,
Mendeleev University of Chemical Technology, Moscow, RUSSIA

84.

The failure thickness of detonation of solutions on the base of strong nitric acid

G.D. Kozak, V.M. Raikova, V.V. Potapov,
Mendeleev University of Chemical Technology, Moscow, RUSSIA

85.

An analytical test of the hypothesis that low molecular weight combustion gases will facilitate achievement of hypervelocity

S.T. Peters, N. Almeyda,
Naval Surface Warfare Center, Indian Head, USA

86.

Analysis of shock wave curvature in the water gap test

E.G. de Jong, R. Oostdam, H.J. Verbeek, R.H.B. Bouma,
TNO PML, Rijswijk, NL

87.

The influence of the free-volume on the cook-off response

G. Scholtes, R.H.B. Bouma, J. Makkus,
TNO PML, Rijswijk, NL

88.

Modellierung von Abbrandphänomenen bei porösen Ladungen
Modeling of combustion phenomena of porous propellants

T.S. Fischer, W. Koppenhöfer, G. Langer,
Fraunhofer ICT, Pfinztal, D

89.

Modellierung der Matrix-Füllstoffablösung von energetischen Materialien mit der Methode der
Finiten Elemente

E. Geißler, C. Hübner,
Fraunhofer ICT, Pfinztal, D

90.

The effect of silicane coupling agent on TATB based PBX

Ji Guangfu, Luo Shunhuo,
Institute of Chemical Materials CAEP, Chengdu, CHINA

91.

Evaluation of PBXs viscoelastic properties and aging behavior by DMA

Hao Ying, Li Jingming,
Institute of Chemical Materials CAEP, Chengdu, CHINA

92.

The effect of copper catalyst in double-base and nitro-amine modified propellant

Wang Jiang-Ning, Wang Bai-Cheng, Zhang Rui-E, Wang Bao-Xiang,
Xian Modern Chemistry Research Institute, Xian, CHINA

93.

Direkte Kreuzkorrelation zur hochauflösenden PIV-Auswertung von Wirbelstrukturen
Direct cross correlation for high resolution PIV of vortex structures

A. Brock, L. Deimling,
Fraunhofer ICT, Pfinztal, D

94.

Modellierung und Simulation der Leistungsdaten, des Abbrandproduktspektrums, der
optimalen Formulierung, der chemischen Stabilität und Kompatibilität, der thermochemischen
Reaktionen und des Alterungsverhaltens in der Produktentwicklung von energetischen
Materialien

*Modelling and simulation of the performance data, of the burning product composition, of the
optimum formulation, of the chemical stability and compatibility, of the thermochemical
reactions, and of the ageing behaviour of energetic materials during their development*

M.A. Bohn,
Fraunhofer ICT, Pfinztal, D

95.

Relationship between the longest N-N bond lengths and activation energies of low-temperature
thermolysis of nitramines