

Monday 1 October

14:00 >> 16:15 Opening Session

Amphitheater

Chairs: Jacob KLEIMAN and Christian DURIN

Opening talk

- 14:00 Christian DURIN, CNES
 Jacob KLEIMAN, ITL
 Christopher SEMPRIMOSCHNIG, ESA
 Jean-François ROUSSEL, ONERA
 Hélène COMBES, CNES

Opening presentations

- 3 presentations of 40 minutes each
- 14:15 Giovanna Giardino, ESA
 Masanori Sasaki, JAXA
 Wu Yiyong, Harbin Institute of Technology China

- 16:15 Coffee Break

Rotonde

16:45 >> 18:20 NEW M&P and METHODS 1

Amphitheater

Chair: Stéphanie REMAURY

- 16:45 **12 – DEVELOPMENT OF NOVEL POLYIMIDE BASED INK FOR POLYJET 3D PRINTING**
 GOUZMAN Irina
- 17:05 **37 – QUALIFICATION OF ADDITIVELY MANUFACTURED MATERIALS FOR ROBOTIC SPACEFLIGHT**
 MCENERNEY Bryan
- 17:25 **108 – ADVANCED MANUFACTURING FOR THE EUROPEAN SPACE INDUSTRY**
 ROHR Thomas
- 17:40 **124 – APPLICATION OF THERMAL CONTROL COATINGS TO ADDITIVE MANUFACTURED PARTS**
 TWOMEY Barry
- 18:00 **149 – BEHAVIOR OF PZT PIEZOELECTRIC MATERIAL LAMINATED ON CARBON RELATED PLATE FOR STRUCTURE IN SPACE ENVIRONMENTAL EFFECT**
 KIM DAE Weon
- 18:20 End
- 19:00 **Welcome cocktail in Biarritz Town Hall**

Tuesday 2 October - Morning

08:30 >> 10:10 STANDARDS, REGULATIONS

Amphitheater

Chair: Christian PUIG

08:30 « In memory of Alain Paillous »

08:50 **14 – A NEW ECSS STANDARD FOR DURABILITY TESTING OF COATINGS**
TIGHE Adrian

09:10 **107 – Impact of REACH Legislation on European Space Programmes Impact of REACH Legislation on European Space Programmes**
ROHR Thomas

09:30 **6 – SPACECRAFT CHARGING MATERIAL PROPERTIES DATABASE**
MINOW Joseph

09:50 Questions & Answers

10:10 Coffee Break

Rotonde

10:30 >> 12:30 CHARGING / RADIATIONS

Chair: Christopher SEMPRIMOSCHNIG

10:30 **11 – EFFECT OF HIGH ENERGY ELECTRONIC IRRADIATION ON THE ELECTRIC PROPERTIES OF A HIGH-PERFORMANCE SPACE-USED THERMOPLASTIC POLYMER**
RIVAL Guilhem

Amphitheater

10:50 **29 – THE ROLE OF ACCELERATION FACTOR IN PROTON IRRADIATION TESTS**
SZNAJDER Maciej

11:10 **58 – INFLUENCE OF TEST CONDITIONS AND VARIABILITY OF END-OF-LIFE SOLAR ABSORPTANCE OF THERMAL CONTROL MATERIALS**
DUZELLIER Sophie

11:30 **79 – LONG-TERM STABILITY OF ION-BEAM TREATED SPACE POLYMERS IN GEO-SIMULATED ENVIRONMENT**
KLEIMAN Jacob

11:50 **133 – CATHODOLUMINESCENCE OF SPACECRAFT MATERIALS**
DEMOL Guillaume

12:10 Questions & Answers

12:30 Lunch

Tuesday 2 October - Afternoon

14:00 >> 16:00 NEW M&P and METHODS 2

Amphitheater

Chair: Mikko NIKULAINEN

- 14:00 **39 – 2D-MATERIALS IN 3D STRUCTURES FOR SPACE APPLICATIONS**
BOLKER Asaf
- 14:20 **99 – CRITICAL STEPS IN ADHESIVE BONDING PROCESS FOR SPACE APPLICATIONS**
JANIK Premysl
- 14:40 **116 – DEGRADATION OF SILVERED COLORLESS-TRANSPARENT POLYIMIDE**
SHIBANO Yasuko
- 15:00 **16 – INFLUENCE OF AMINE AND EPOXIDE POSS ON THE FUNCTIONALITY OF SHAPE MEMORY POLYMERS AND THEIR DURABILITY TO THE LOW-EARTH ORBIT SPACE ENVIRONMENT**
VERKER Ronen
- 15:20 **10 – RADIATION STABILITY OF COATINGS BASED ON TiO₂, ZnO AND SiO₂ NANOSTRUCTURED PIGMENTS TO PROTON EXPOSURE**
NESHCHIMENKO Vitali
- 15:40 **69 – METHODOLOGY FOR FINGERPRINTING OF MATERIALS AND PROCESSES**
ECK Julien

16:00 Coffee Break

Rotonde

16:30 >> 18:30 POSTER SESSION 1

Rotonde

18:00 **Wine and Cheese party**

Rotonde

19:30 End

Wednesday 3 October - Morning

08:30 >> 10:10 COMBINED EFFECTS

Amphitheater

Chair: Sophie DUZELLIER

- 08:30 **28 – CHARACTERIZATION OF THE INDUCED CONTAMINATION AFTER ATOMIC OXYGEN EROSION OF SPACE MATERIALS**
YAMANAKA Riyo
- 08:50 **36 – ADDRESSING MATERIAL CHALLENGES FOR THE EUROPA CLIPPER MISSION**
LOW Nora
- 09:10 **81 – MITIGATING THE EFFECT OF SPACE SMALL DEBRIS ON COPV IN SPACE WITH FIBER SENSORS MONITORING AND SELF-REPAIRING MATERIALS**
HADDAD Emile
- 09:30 **110 – THE CRITICAL MATERIALS TECHNOLOGY PROGRAMME FOR ESA'S BEPI-COLOMBO MISSION**
SEMPRIMOSCHNIG Christopher
- 09:50 Questions & Answers
- 10:10 Coffee Break

Rotonde

10:30 >> 12:30 EXTREME ENVIRONMENTS

Chair: Masahito TAGAWA

- 10:30 **49 – ATOMIC OXYGEN INTERACTIONS WITH CARBON AT HIGH TEMPERATURES RELEVANT TO ATMOSPHERIC ENTRY**
MINTON Tim
- 10:50 **60 – A LOW-DENSITY WIND TUNNEL FOR MARTIAN ENVIRONMENT SIMULATION**
LIU Chen
- 11:10 **75 – DEVELOPMENT OF A HIGH TEMPERATURE BLACK COATING FOR SPACE APPLICATION**
SIERRA Guillaume
- 11:30 **106 – CHARACTERIZATION OF SPACE DEBRIS MATERIALS DURING THEIR ATMOSPHERIC ENTRY**
BALAT-PICHELIN Marianne
- 11:50 **159 – APPORTS OF 3D SEM TO THE CHARACTERISATION OF MICROMETEORIODS CRATERS**
VIALLET Benoit
- 12:10 Group photography
- 12:30 Lunch

Rotonde

Wednesday 3 October - Afternoon

14:00 >> 16:00 CONTAMINATION 1

Amphitheater

Chair: Delphine FAYE

- 14:00 **7 – COMMON – CONTAMINATION MONITORING – A NEW METHOD FOR ON-LINE DETERMINATION OF CONDENSING MOLECULAR ORGANIC CONTAMINANTS**
SCHUSTER Marc
- 14:20 **61 – MOLECULAR ORGANIC CONTAMINATION – FTIR MEASUREMENT INTERLABORATORY COMPARISON AND ERROR ANALYSIS**
MALICKI Michal
- 14:40 **68 – IMPACT OF MOLECULAR CONTAMINATION ON OPTICAL TRANSMISSION AND REDISTRIBUTION PHENOMENON**
ECK Julien
- 15:00 **91 – CHARACTERIZATION AND DETERMINATION OF LUNAR DUST SIMULANT CHARGE AND ADHESION**
OUDAYER Pauline
- 15:20 **94 – IN-SITU TRANSMITTANCE AND REFLECTANCE MEASUREMENTS ON CONTAMINATED MGF2 WINDOWS**
BRAS Bruno
- 15:40 Questions & Answers
- 16:00 Coffee Break

Rotonde

16:30 >> 18:30 POSTER SESSION 2

Rotonde

ROUND TABLES

Collaborative research subject

Cost reduction

Databases

18:30 End

19:30 **Conference dinner, Biarritz Aquarium**

Thursday 4 October - Morning

08:30 >> 10:10 FLIGHT EXPERIMENTS

Amphitheater

Chair: Yugo KIMOTO

- 08:30 **165 – SPACE MATERIALS AND COMPONENT UTILIZATION OF THE MATERIALS ISS EXPERIMENT FACILITY**
HEATH Kevin
- 08:50 **50 – ON ORBIT CONTAMINANT DEPOSITION MEASUREMENTS ON THE RUSSIAN SEGMENT OF THE INTERNATIONAL SPACE STATION**
KRYLOV Andrey
- 09:10 **104 – ANALYSIS OF FIRST DATA FROM ATOMIC OXYGEN MONITOR SYSTEM ON-BOARD SLATS**
KIMOTO Yugo
- 09:30 **115 – MATERIAL DEGRADATION MONITOR 2 (MDM2) MISSION: GROUND ANALYSIS RESULTS**
GOTO Aki
- 09:50 Questions & Answers
- 10:10 Coffee Break

Rotonde

10:30 >> 12:30 AO – LEO

Amphitheater

Chair: Tim MINTON

- 10:30 **53 – OVER-ESTIMATION OF ATOMIC OXYGEN FLUENCES DUE TO UNDECOMPOSED OXYGEN MOLECULES INCLUDED IN HYPERTHERMAL BEAMS**
TAGAWA Masahito
- 10:50 **59 – HIGHLY EFFICIENT PROTECTION OF POLYIMIDE FILMS UNDER ATOMIC OXYGEN ATTACK BY SI-P DOUBLE EFFECT**
WU Bohan
- 11:10 **80 – ENHANCEMENT OF ATOMIC OXYGEN RESISTANCE OF CHARGE DISSIPATIVE ION BEAM TREATED POLYMERS**
KLEIMAN Jacob
- 11:30 **9 – ATOMIC OXYGEN FLUX MEASUREMENTS VIA PYROLYTIC AND THERMOFORMED KAPTON INTEGRATED WITH THE ON-ORBIT MATERIALS DEGRADATION DETECTOR (ORMADD)**
VERKER Ronen
- 11:50 **162 – DESIGN AND DEVELOPMENT OF A HYPERTHERMAL ATOMIC OXYGEN WIND TUNNEL FACILITY**
ABRAO OIKO Vitor Toshiyuki
- 12:10 Questions & Answers
- 12:30 Lunch

Rotonde

Thursday 4 October - Afternoon

14:00 >> 16:00 CONTAMINATION 2

Amphitheater

Chair: Jean-François ROUSSEL

- 14:00 **96 – MOLECULAR CONTAMINATION FROM SPACE MATERIALS: SPECIES CHARACTERIZATION BY TGA/MS**
GROSJEAN Eudes
- 14:20 **102 – INNOVATIVE METHODOLOGY FOR EMISSION MODEL OF CONTAMINATION MOLECULES BASED ON DIFFUSION THEORY**
SHIMAZAKI Kazunori
- 14:40 **136 – EFFECT OF SPACE ENVIRONMENT ON NV14 CERAMIC WHITE COATING OF HIGH GAIN ANTENNA OF BEPICOLOMBO SPACECRAFT: LONG DURATION TEST**
BUTENKO Yuriy
- 15:00 **143 – Comparison of Molecular Contamination Models Based on TGA / MS Experiments**
VANHOVE Emilie
- 15:20 **156 – SPACECRAFT CONTAMINATION CONTROL CHALLENGES FOR SPACE MISSIONS WITH ORGANIC COMPOUND DETECTION CAPABILITIES AND FOR POTENTIAL SAMPLE RETURN**
SOARES Carlos
- 15:40 Questions and Answers
- 16:00 Coffee Break

Rotonde

16:30 >> 18:30 POSTER SESSION 3

Rotonde

18:30 End

Friday 5 October

08:30 >> 10:10 CONTAMINATION 3

Amphitheater

Chair: Carlos SOARES

- 08:30 **157 – EXTERNAL CONTAMINATION INTEGRATION OF VISITING VEHICLES ON THE INTERNATIONAL SPACE STATION**
STEAGALL Courtney
- 08:50 **2 – OUTGASSING MODELLING: CHALLENGES AND PERSPECTIVES**
ZITOUNI Bayrem
- 09:10 **34 – MODELLING AND LABORATORY TESTING OF PARTICLE RESUSPENSION AND TRANSPORT FOR THE ASSESSMENT OF TERRESTRIAL-BORNE BIOLOGICAL CONTAMINATION OF THE SAMPLES ON THE MARS 2020 MISSION**
MIKELLIDES Loannis
- 09:30 **148 – HIGHLY SENSITIVE MATERIAL EMISSION PROFILING METHOD AT ELEVATED TEMPERATURES BY AUTOMATED TIME SERIES TD-GC/MS**
KELLER Markus
- 09:50 Questions & Answers
- 10:10 Coffee Break

Rotonde

10:30 >> 12:30 NEW M&P and METHODS 3

Amphitheater

Chair: Irina GOUZMAN

- 10:30 **71 – CHARACTERIZATION OF DIRECT BONDING SHOCK STRENGTH: VALIDATION WITH CORNER CUBE IMPACT TESTS**
MAUREL-PANTEL Aurélien
- 10:50 **85 – AGEING IMPROVEMENT OF SILICON-BASED RESINS SUBJECT TO PROTON IRRADIATION IN SPATIAL GEOSTATIONARY ENVIRONMENT**
LANSADE David
- 11:10 **87 – REAL PREDICTION OF GROUND AGING OF MATERIALS USING THERMOKINETIC ANALYSIS – CORRELATION WITH REAL TIME AGING**
PUIG Christian
- 11:30 **120 – FIRST SURFACE FLEXIBLE OPTICAL SOLAR REFLECTORS WITH ‘INTERFERENTIAL CERMET’ COATINGS**
MENGALI Sandro
- 11:50 **152 – PROTECTIVE COATINGS FOR TUBULAR BOOMS APPLICATIONS**
OSSOWSKI Maciej
- 12:10 Questions & Answers

12:20 >> 12:30 Closing remarks

Chairs: Jacob KLEIMAN and Christian DURIN

- 12:30 Lunch
- 14:00 End

Rotonde

Posters

AO – LEO

13 – ATOMIC OXYGEN MODELLING: ANALYSIS IMPLEMENTATION INTO SPACECRAFT DESIGN

ZITOUNI Bayrem

66 – EFFECTS OF SEQUENT TEST OF THERMAL CYCLING AND ATOMIC OXYGEN INTERACTION WITH GRAPHITE/ CYANATE COMPOSITES

ZHAI Ruiqiong

161 – ATOMIC-OXYGEN DURABLE POSS POLYIMIDE BLENDS FOR SPACE APPLICATION

QIAN Min

COMBINED EFFECTS

48 – EFFECT OF VACUUM THERMAL CYCLING ON LOW-VELOCITY IMPACT BEHAVIOR OF A CARBON/BMI COMPOSITE

DONG Shangli

67 – INVESTIGATION EFFECT OF SPACE ENVIRONMENT ON MATERIALS PROPERTIES WITH ALCHIMIE: ONERA RADIATION AND SURFACE ANALYSIS FACILITY

DUZELLIER Sophie

83 – INVESTIGATION ON FREE RADICAL EVOLUTION AND OPTICAL DEGRADATION OF POLYIMIDE UNDER COMBINED IRRADIATION

WU You

90 – INVESTIGATION ON THE DAMAGE BEHAVIOR OF POLYIMIDE MATERIAL UNDER THE STRESS – PROTON RADIATION COUPLING FIELD

SUN Chengyue

100 – SURFACE ANALYSIS OF SOLAR CELL COVER GLASSES AND OSR AFTER HIGH TEMPERATURE UV AND VUV EXPOSURE

JANIK Premysl

122 – STUDY OF THE FIRST STAGES OF LASER INDUCED CONTAMINATION

GEBRAYEL EL READY Georges

140 – A KINETIC STUDY OF RADIATION INDUCED CONTAMINATION EFFECTS

BUTENKO Yuriy

146 – SYNERGISTIC EFFECTS OF ELECTRON AND PROTON RADIATION ON THE OPTICAL MATERIALS

LIU Hai

147 – LOW PRESSURE DISCHARGE BEHAVIORS AND MECHANISMS IN NEAR SPACE ATMOSPHERE

LI hang

CONTAMINATION

5 – CONTAMINATION OF PROTECTIVE COATINGS OF SPACECRAFT SOLAR ARRAYS DUE TO ELECTROSTATIC DISCHARGES UNDER ELECTRON IRRADIATION

KHASANSHIN Rashid

25 – EVALUATION OF DECONTAMINATION PROCESSES ADAPTED TO LARGE OPTICAL COMPONENTS

CHEUNG David

26 – CONTAMINATION STUDY OF SPACE SENSITIVE SURFACES BY PACKAGING MATERIALS

CHEUNG David

43 – STRAY LIGHT SUPPRESSION FOR LARGE SCALE HIGHLY SENSITIVE TO CONTAMINATION SPACE SYSTEMS

KATSIR Dina

70 – RESULTS OF MATERIALS COMPATIBILITY STUDIES WITH BIOCIDES CLEANER

BETH Nathalie

84 – IN SITU ANALYSIS OF CONTAMINANTS DEPOSIT

RIOLAND Guillaume

EXTREME ENVIRONMENTS

4 – DEGRADATION OF THIN FILM SOLAR CELLS IN MOON ENVIRONMENT

GAPANOVICH Mikhail

24 – PARTICLE INDUCED FREE RADICAL BEHAVIORS AND APPLICATIONS IN ORBITAL IRRADIATION-DAMAGE EVALUATION OF POLYMERS

WU Yiyong

27 – IMPROVED DURABILITY OF CARBON FIBER REINFORCED CYANATE ESTER COMPOSITES TO HYPERTHERMAL ATOMIC OXYGEN ATTACK

CHE LI

30 – RADIATION EFFECTS IN HIGH-TEMPERATURE YBCO SUPERCONDUCTORS WITH LOW-ENERGY PROTONS FOR SPACE RADIATION ENVIRONMENTS

LI Fang

33 – EFFECT OF LOW-ENERGY PROTON RADIATION ON MICROSTRUCTURE OF Ti3C2TX FILM

LIU Yong

45 – BLACK COATINGS FOR COMBINED STRAY LIGHT AND THERMAL PASSIVE MANAGEMENT FOR THE CHALLENGING ENVIRONMENTAL CONDITIONS OF SOLAR ORBITER

KATSIR Dina

46 – INFLUENCE OF SPACE RADIATION MODEL UNCERTAINTIES ON THE THERMOPHYSICAL PROPERTIES EVALUATION OF ITO/KAPTON/AL FILM

SHEN Zicai

88 – DEGRADATION OF SPACECRAFT THERMAL CONTROL MATERIALS UNDER MEO RADIATION ENVIRONMENT

DING Yigang

98 – CHARGING AND DISCHARGING RISK EVALUATION IN MEO ELLIPTIC ORBIT BASED ON SPACE ENERGY SPECTRAL CALCULATION

WANG Hao

134 – PROPERTIES OF POLYMER COMPOSITE MATERIALS FOR SLIDING SEAL IN THE EXTREME TEMPERATURE ENVIRONMENT

MATSUMOTO Koji

FLIGHT EXPERIMENTS

51 – LATEST IN-FLIGHT RESULTS OF THERMAL COATINGS AGING ON THERME

PERRAUD Sophie

103 – SPACE DEMONSTRATION ANALYSIS RESULTS OF PHOTOCURABLE-SILSESQUIOXANE-COATED POLYIMIDE FILMS ONBOARD THE INTERNATIONAL SPACE STATION

KIMOTO Yugo

115 – MATERIAL DEGRADATION MONITOR 2 (MDM2) MISSION: GROUND ANALYSIS RESULTS

GOTO Aki

154 – DATA ANALYSIS OF PLUME EFFECT DETECTOR FOR “TZ-1” CARGO SPACESHIP

YU Qian

NEW M&P AND METHODS

3 – SHAPE CONTROL ANALYSIS OF INFLATABLE MEMBRANE STRUCTURES USING AN ADAPTIVE GENETIC ALGORITHM

KUMAR SATISH

8 – BLACK FUNCTIONALISED SURFACES BY USING LASER TECHNOLOGIES

ZAPATA Asensio

15 – EMPLOYMENT OF BROADBAND DIELECTRIC SPECTROSCOPY (BDS) IN STUDIES OF ANTENNA MATERIALS AND LIQUIDS

HOLYNSKA Malgorzata

18 – NON ORDINARY TEST SET UP FOR QUALIFICATION OF ADDITIVE LAYER MANUFACTURING METAL SAMPLES USED IN CRYOGENIC SPACE APPLICATIONS

TUFANO Maria

20 – MÉTHODOLOGIES USED FOR THE DESIGN OF NEW STRATOSPHERIC AEROSTATS

PLANES Mikael

21 – UTILISATION OF ACKTAR BLACK™ COATINGS IN SPACE APPLICATIONS

ROSSI Laurence

22 – CHARACTERIZATION OF SEALED THERMO-OPTICAL WHITE COATINGS ON ACTUAL FLIGHT PARTS INVOLVING NON-TACTILE DIGITAL MICROSCOPY

MEYER FRANK

23 – THE QUALIFICATION OF ENBIO SOLAR WHITE THERMAL CONTROL COATING WITH ITO COATING AND IT USE ON THE SOLAR ORBITER PROJECT

MCCAUL Terence

31 – STRAY-LIGHT REDUCTION OF SILICON PARTICLE REINFORCED ALUMINUM FOR OPTICAL SYSTEMS

KINAST Jan

32 – EXPERIMENTAL AND NUMERICAL CHARACTERIZATION OF THIN WOVEN COMPOSITES USED IN PRINTED CIRCUIT BOARDS. PREDICTION OF THE BOARD RELIABILITY IN SPATIAL CONDITIONS

GIRARD Gautier

35 – WATER CRITICALITY ASSESSMENT FOR CRYOGENIC SURFACES IN SPACECRAFTS

KILITOGU BAHAR

38 – ELECTRICAL DAMAGE BEHAVIOUR AND OPTIMIZATION APPROACH OF INVERTED METAMORPHIC MULTI-JUNCTION SOLAR CELLS UNDER HIGH-ENERGY ELECTRON IRRADIATION

YANQING ZHANG

47 – MEASUREMENTS OF THERMO-OPTICAL PROPERTIES OF MATERIALS WITH MEDIUM REFLECTANCE

WITZKE Andreas

52 – THE NEWLY DESIGNED GROUND SIMULATOR FOR SPACE INTEGRATED-IRRADIATION ENVIRONMENTAL SIMULATION AND SCIENTIFIC RESEARCH ON THE ORBITAL BEHAVIORS OF SPACE SYSTEMS

JU Dandan

54 – ONE-NOZZLE TWO-BEAM LASER-DETONATION SYSTEM

YOKOTA KUMIKO

55 – CARBON NANOTUBES IN SPACE ENVIRONMENT-DEVELOPMENT AND GROUND VALIDATION OF A MATERIAL EXPERIMENT FOR SMALL SATELLITES

ABBE Elisabeth

56 – A HYPERVELOCITY DUST RESEARCH SYSTEM AS A TOOL FOR STUDYING INTERPLANETARY DUST

WANG Hao

57 – VALIDATION OF ATOMIC OXYGEN ACTIVE DETECTOR RESISTACK

DUZELLIER Sophie

65 – SOLAR SYSTEM SPACE KEY FACTOR ORIENTED GROUND INTEGRATED ENVIRONMENT SIMULATION RESEARCH FACILITY - ISESRS

YAN Jihong

72 – PHOTOSTABILITY OF ORGANOSILICON LACQUER MODIFIED BY SiO₂ NANOPOWDERS – BINDER THERMAL CONTROL COATINGS FOR SPACECRAFT

NESHCHIMENKO Vitali

73 – ELABORATION AND CHARACTERIZATIONS OF THERMO-OPTICAL COATINGS FOR SPACE APPLICATIONS

ESCOBAR Julien

74 – DEVELOPMENT OF A NEW ALUMINIUM PAINT: MAP® RM27

SIERRA Guillaume

77 – NEW WHITE ANTISTATIC COATING FOR SPACE USE

SIERRA Guillaume

78 – DEVELOPMENT OF AN OPTICAL BLACK COATING FOR SPACE APPLICATION

SIERRA Guillaume

82 – A MULTIFUNCTIONAL CODE FOR SIMULATION AND OPTIMIZATION OF NEW-DESIGNED MJ SOLAR CELLS APPLIED IN SPACE

GUO Hongliang

86 – THERMAL GRAVIMETRIC ANALYSIS WITH GAS CHROMATOGRAPHY AND MASS SPECTROMETRY (TGA-GC-MS) OF MATERIALS USED IN SPACE INDUSTRY

BOLKHOVITINOV Alex

92 – A LUNAR DUST SIMULATOR DESIGNED FOR GROUND TEST WITH COMPREHESIVE ENVIROMENTS

LI Lifang

93 – CARBON NANOTUBES – A ROUTE TOWARDS SPACE APPLICATION

ABBE Elisabeth

95 – USE INFLATABLE BRAKING DEVICE IN RE-ENTRY SYSTEM DESIGN

KORYANOV Vsevolod

97 – SPECULARITY CONSTRAINTS IN TELECOM REFLECTORS PAYLOADS – EVALUATION AND POSSIBLE USE OF NEW DIFFUSE METALLIZATION PROCESS (AIRBUS DS)

MANGAS Carlos

101 – EVALUATION OF VACUUM TRANSFER VESSEL PERFORMANCE TO CONSTRUCT CLUSTER TYPE IN-SITU TEST FACILITIES NETWORK

SIMON Alexandre Paul

105 – DEVELOPMENT OF A NEW CQCM/ TQCM SENSOR TO ACHIEVE GOOD USABILITY AND TEMPERATURE MEASUREMENT

TSUCHIYA Yuta

109 – CULTIVATION OF RESEARCH AND PROJECT-SUPPORT NETWORK FOR DEGRADATION OF SPACE-USE MATERIALS – CONCEPT OF CLUSTER TYPE IN-SITU TEST FACILITIES SYSTEM

IWATA Minoru

114 – MULTISCALE MODELING METHODS TO SIMULATE EFFECTS OF SPACE ENVIRONMENT COMPONENTS ON NANOSTRUCTURED MATERIALS

VORONINA Ekaterina

118 – PERFORMANCE OF LIQUID SiO₂ COATING FOR REINFORCEMENT OF THERMAL CONTROL SURFACE

KINJO Tomihiro

119 – THERMAL VACUUM OF THE EUCLID SSH STRUCTURAL MODEL, A MODIFIED BAKE OUT APPROACH

RIVA Stefano

121 – THERMAL PROTECTION OF AN ULTRA-THIN POLYMER COMPOSITE DEPLOYABLE ANTENNA USING FLEXIBLE COATINGS

SULIGA Agnieszka

123 – VUV/EUV TRANSMITTANCE AND LIGHT SCATTERING CHARACTERIZATION OF CONTAMINATED OPTICAL COMPONENTS

FAYE Delphine

125 – SURFACE MODIFICATION OF ULTRA-THIN POLYMER COMPOSITES FOR THE LEO SPACE ENVIRONMENT

BRINKMEYER Alex

126 – ONE-STEP MODIFICATION OF SPACE INTEGRATED SURFACES (OSMOSIS) FOR ADHESIVE PRIMING

BYRNE Lorcán

127 – ANTI-GALLING TREATMENT FOR BOLTS AND FASTENERS

TWOMEY Barry

128 – ECO-FRIENDLY HYBRID SOL-GEL COATINGS FOR REPLACEMENT OF CR-BASED TREATMENTS IN MEDIUM STRENGTH ALUMINIUM ALLOYS FOR SPACE APPLICATION

SANTA COLOMA Patricia

130 – CITRIC ACID AS AN ENVIRONMENTALLY FRIENDLY ALTERNATIVE FOR STAINLESS STEELS PASSIVATION

SANTA COLOMA Patricia

131 – USE OF GC/MS FOR CLEANROOM AIR CHARACTERISATION

MARTINS Ricardo

137 – SURFACE CHARACTERISATION OF MATERIALS EXPOSED TO ATOMIC OXYGEN USING ESAS LEOX FACILITY

MILASSIN Gabor

138 – STUDY OF MATERIALS CORROSION RESSISTANCE TO NITRIC ACID DROPLETS IN VACUUM

BUTENKO Yuriy

139 – APPLICATION OF SURFACE ENHANCED RAMAN SPECTROSCOPY FOR CONTAMINATION ANALYSES IN SPACE ENVIRONMENT TESTING AND MONITORING OF ENVIRONMENT

BUTENKO Yuriy

144 – FEMTOSECOND LASER MACHINING FOR THE CHARACTERISATION OF DOSE DEPENDENT MECHANICAL PROPERTIES OF POLYIMIDE FOILS

MILASSIN Gabor

150 – ADVANCED PARYLENE TECHNOLOGY FOR SPACE ENVIRONMENT

KUMAR Rakesh

151 – SURFACE TREATMENT FOR TRIBOLOGICAL IMPROVEMENT OF THUNGSETN AND PERMENDUR FOR S-HEEP PENETRATOR

BOCHRA Kamil

153 – COMPOSITE OF POLYETHER ETHER KETONE AND POLYIMIDE KAPTON DEPOSITED WITH CONDUCTIVE DIAMOND CONSIDERING SPACE ENVIRONMENTAL EFFECT

KIM TAE Gyu

155 – DETERMINATION OF A CRITICAL CRITERION FOR PRESSURIZED BALLOONS ENVELOPES IN THE PLASTIC DOMAIN USING IN SITU RAMAN SPECTROSCOPY UNDER BIAXIAL STRESS

DONNAY Martin

158 – A COMPREHENSIVE STUDY OF NEW THERMAL CONTROL PAINTS

KLEIMAN Jacob

160 – THERMOPLASTIC PREPREG AND WELDING TECHNOLOGIES DEVELOPMENTS AT IRT SAINT-EXUPÉRY

CHEVALIER Mathieu

162 – DESIGN AND DEVELOPMENT OF A HYPERTHERMAL ATOMIC OXYGEN WIND TUNNEL FACILITY

ABRAO OIKO Vitor Toshiyuki

STANDARDS, REGULATIONS

62 – ISS PAYLOAD SAFETY- A MATERIALS AND PROCESSES OVERVIEW

MOONEY Cathal

76 – MANAGEMENT OF RAW MATERIALS OBSOLESCENCE, EXAMPLE OF MAPSIL 214

SIERRA Guillaume

129 – MATERIAL RADIATION TESTING GUIDELINES FOR SPACE APPLICATION

LEWANDOWSKI Simon

164 – THERMAL GRAVIMETRIC ANALYSIS WITH GAS CHROMATOGRAPHY AND MASS SPECTROMETRY (TGA-GC-MS) OF MATERIALS USED IN SPACE INDUSTRY

BOLKHOVITINOV Alex

STANDARDS, REGULATIONS/DATABASE

42 – EUROPEAN SPACE MATERIALS DATABASE

GRAHAM Adrian

132 – MAMA: A DATA BASE FOR SEY MATERIALS PROPERTIES AND MODELS

JEANTY RUARD Benjamin

163 – MATREX - MATERIAL RECORDING EXPERIENCE: NEW FEATURES AND REGULATORY CONSIDERATIONS

COCHETEAU Vanessa