

3.4 Reactions with O₂

- OXIDATION OF ALUMINUM SINGLE CRYSTAL FACES: (100),
(110), AND (111)
S.A. Flodström, R.Z. Bachrach, R.S. Bauer, S.B.M. Hagström 869
- INITIAL STAGES OF OXIDATION OF Fe(110) AT ROOM TEMPERATURE STUDIED
BY ELECTRON SPECTROSCOPY AND SURFACE POTENTIAL
M.A. Chesters, J.C. Riviere 873
- KINETICS OF THE INTERACTION OF OXYGEN WITH A Cu(111)
SURFACE AND OF THE REACTION OF CO WITH ADSORBED OXYGEN
F.H.P.M. Habraken, E.P. Kieffer, G.A. Bootsma 877
- O₂-LaB₆(110)-INTERACTION
E.B. Bäs, P. Hafner, S. Klauser 881

A COMPARISON OF THE ADSORPTION OF O_2 AND CO ON MOLYBDENUM USING LOW-ENERGY SIMS AND EID P.H. Dawson	885
ADSORPTION OF OXYGEN AND NITROGEN ON CLEAN SURFACES OF TRANSITION METALS E. Fromm	889
THE ADSORPTION KINETICS OF OXYGEN ON A TUNGSTEN POLYHEDRAL SINGLE CRYSTAL K. Besocke, S. Berger	893
OXYGEN ADSORPTION ON COPPER: ITS DEPENDENCE ON THE STEP DENSITY OF A CYLINDRICAL SURFACE CONTAINING THE (001) POLE, INVESTIGATED BY LEED AND AUGER MEASUREMENTS U. Gerhardt, G. Franz-Möller	897
RESONATING QUARTZ MICROBALANCE MEASUREMENTS OF THE ADSORPTION OF O_2 , CO AND N_2 ON Ti B. Kasemo, E. Törnqvist	899
THE STRUCTURE OF CLEAN AND OXYGEN COVERED Mo(001) AND Mo(111) SURFACES DETERMINED FROM LOW ENERGY ELECTRON DIFFRACTION L.J. Clarke	A-2725
COADSORPTION OF CESIUM AND OXYGEN ON W(110) J.-L. Desplat	903
SURFACE STRUCTURE DEPENDENCE OF OXYGEN ADSORPTION ON PLATINUM (100)-FACES G. Pirug, G. Brodén, H.P. Bonzel	907
DISORDERING PHENOMENA AND ADATOM-ADATOM INTERACTIONS IN CHEMISORPTION: A STUDY OF W(110) _p (2x1)O AS A FUNCTION OF COVERAGE G.-C. Wang, T.-M. Lu, M.G. Lagally	A-2726
SURFACE REACTIONS INVESTIGATED BY MODULATION SPECTROSCOPY AND PHOTOPOTENTIAL MEASUREMENTS W. Paatsch	911
THE INFLUENCE OF AN ELECTRON BEAM ON THE OXIDATION OF A Ni(110) SURFACE J. Verhoeven	915
ELECTRON-STIMULATED OXIDATION OF InP STUDIED BY AUGER ELECTRON SPECTROSCOPY AND CHARACTERISTIC ENERGY LOSS SPECTRA ON InP(100) P. Faulconnier, J. Olivier, R. Poirier	A-2726
ULTRAVIOLET PHOTOELECTRON SPECTROSCOPY STUDY OF THE OXIDATION OF Zn I. Abbati, L. Braicovich, R.A. Powell, W.E. Spicer	919
XPS INVESTIGATION OF PRESSURE INFLUENCE AND CHEMICAL FORMS IN OXIDATION OF TITANIUM L. Porte, M. Demosthenous, G. Hollinger, Y. Jugnet, P. Pertosa, Tran Minh Duc	923
MICROPROBE AUGER ANALYSIS OF HETEROGENEOUS OXIDATION OF ALLOYS AND DETERMINATION OF GRAIN BOUNDARY DIFFUSION CONSTANT H. Shimizu, M. Ono, K. Nakayama	A-2727

THE OXIDATION OF SURFACE CARBON ON A STEPPED Pt(111) SURFACE F.P. Netzer, R.A. Wille	927
OXIDATION OF CuAl, CuZn AND CuZnAl ALLOYS STUDIED BY AES P.-E. Nilsson-Jatko, S.-E. Karlsson	931
A STUDY OF OXIDATION IN THIN EVAPORATED NICKEL FILMS K. Röhl, H. Zauner, H. Hoffmann	935
SURFACE OXIDATION OF IRON SINGLE CRYSTAL (111) S. Nakanishi, T. Horiguchi	A-2727
METAL LOSSES OF POLYCRYSTALLINE IRIDIUM DURING HIGH-TEMPERATURE OXIDATION IN LOW-PRESSURE OXYGEN ATMOSPHERES H. Jehn	939
AB INITIO HARTREE-FOCK STUDIES OF THE INTERACTION OF OXYGEN WITH THE LITHIUM(100) SURFACE K. Hermann	943
SIMULTANEOUS RHEED AND X-RAY EMISSION ANALYSIS OF REACTING SURFACES D.F. Mitchell, P.B. Sewell	947
STUDY OF THE ELECTRONIC INTERACTIONS OF O ₂ WITH UV IRRADIATED TiO ₂ BY PHOTOCONDUCTIVITY MEASUREMENTS. CONSEQUENCES FOR PHOTOCATALYTIC OXIDATIONS J.M. Herrmann, J. Disdier, P. Pichat	951
THE ROLE OF ION-IMPLANTED IMPURITIES ON THE THERMAL OXIDATION OF COPPER G. Dearnaley, J.R. Morris, R.A. Collins	955
HIGH RESOLUTION AUGER ELECTRON AND X-RAY PHOTOELECTRON SPECTROSCOPY OF THE OXIDATION OF NICKEL METAL G.C. Allen, P.M. Tucker, R.K. Wild	959
OXYGEN INTERACTION WITH THE Co(100) FACE G. Rovida, M. Maglietta	963
RADIATIVE LIFETIME MEASUREMENT USED IN THE DYNAMIC ANALYSIS OF GAS ADSORPTION PROCESSES BY A SOLID SURFACE J. Azencot, R. Goutte	967
 3.5 <u>Reactions with H₂</u>	
DESORPTION KINETICS OF AN H ₂ MONOLAYER ADSORBED ON W(POLY) AT 300 K E. Román, J.L. de Segovia	971
OBSERVATIONS ON THE UBIQUITY AND MODE OF ORIGIN OF HYDROGEN GAS IN ALKALI METAL-IN-GLASS SYSTEMS L.B. Thomas, P.W. Blickensderfer	975
HYDROGEN ATOM SURFACE RECOMBINATION AT LOW TEMPERATURES STUDIED BY MOLECULAR BEAMS, MICROCALORIMETRY AND MASS SPECTROMETRY T.R. Govers, L. Mattera, G. Scoles	A-2728
ADSORPTION STATES OF HYDROGEN ON Pt, W, Cu, AND ALLOY SYSTEMS OF Cu _{1-x} Ni _x STUDIED BY NMR T. Ito, T. Kadowaki	979

SIMS STUDY OF ADSORPTION ON Ni(110), (100) AND (111) M. Barber, R.S. Bordoli, J.C. Vickerman, J. Wolstenholme	983
TIME-OF-FLIGHT MEASUREMENTS ON DESORBING HYDROGEN MOLECULES G. Comsa, R. David, K.D. Rendulic	987
THEORETICAL STUDY OF THE SITE DEPENDENCE OF THE SURFACE VIBRATIONAL FREQUENCIES OF H ADSORBED ON A Be SURFACE P.S. Bagus, C.W. Bauschlicher, Jr.	989
CHEMISORPTION OF HYDROGEN ON POLYCRYSTALLINE TUNGSTEN T. Oguri	993
TEMPERATURE DEPENDENCE OF THE ADSORPTION KINETICS FOR HYDROGEN CHEMISORBED ONTO EVAPORATED Fe FILMS M.R. Shanabarger	997
HYDROGEN-DEUTERIUM EXCHANGE ON (100), (110), (111) AND POLYCRYSTALLINE IRON SURFACES J.-C. Cavalier, E. Chornet	A-2728
 3.6 <u>Reactions with N₂, NO</u>	
INFLUENCE OF THE SURFACE STATE ON THE REACTIONS OF TRANSITION METALS WITH NITROGEN, OXYGEN, AND HYDROCARBONS G. Hörz, H. Kanbach, R. Klaiß, H. Vetter	999
PHOTOELECTRON SPECTROSCOPY OF NITROGEN ADSORBED ON W(110) J.C. Fuggle, D. Menzel	1003
COMBINED AES, ELS, AND EID STUDIES OF NO ADSORPTION ON UHV-CLEAVED Si(111) SURFACES M. Miyamura, Y. Sakisaka, M. Nishijima, M. Onchi	1007
INTERACTION OF NO WITH A HOT POLYCRYSTALLINE TUNGSTEN FILAMENT J.M. López-Sancho, M.C. Refolio	1011
 3.7 <u>Reactions with CO</u>	
COADSORPTION OF CARBON MONOXIDE AND HYDROGEN ON METAL SURFACES K. Kawasaki, T. Kioka, H. Miki, T. Kodama	1015
VIBRATIONAL EXCITATIONS AND STRUCTURE OF CO ADSORBED ON THE CLEAN AND THE HYDROGEN COVERED Ni(100) SURFACE S. Andersson	1019
MEASUREMENTS OF THE ANGULAR DISTRIBUTIONS OF MOLECULES DESORBED FROM MOLYBDENUM SURFACES M. Kobayashi, M. Kim, Y. Tuzi	1023
THERMAL DESORPTION OF CO FROM SOME STAINLESS STEEL A. Mathewson, R. Calder, A. Grillot, P. Verbeek	1027
MOLECULAR CLUSTER CALCULATIONS OF CO CHEMISORPTION ON A Ni(100) SURFACE A. Rosén, E.J. Baerends, D.E. Ellis	1031
INVESTIGATION OF CO ADSORPTION ON NICKEL BY LOW ENERGY ION SCATTERING E. Taglauer, W. Heiland, W. Englert, U. Beitat	A-2729

CHEMISORPTION OF CO ON GRAPHITE G. Giunchi, E. Clementi	A-2729
3.8 <u>Reactions with Other Molecules</u>	
ENERGETIC INTERACTION OF NOBLE GASES ON TUNGSTEN IN THE RANGE BETWEEN 1000 K AND 2000 K G. Grosse, G. Messer, E. WoECKel	1035
KINETIC STUDIES ON SINGLE CRYSTALS OF FLUORIDES AND OXIDES BY SIMS AND AES R. Buhl, A. Preisinger	1039
THE ADSORPTIVE/REACTIVE INTERACTIONS OF H ₂ CO ON A Ni(110) SURFACE T.J. Dickinson, R.J. Madix	A-2730
INFRARED REFLECTION STUDY OF ACETYLENE CHEMISORPTION ON DEPOSITED NICKEL AND PALLADIUM FILMS M. Ito, W. Suétaka	1043
CO-ADSORPTION OF CH ₄ AND CO ON TITANIUM SURFACE T. Sugita, H. Ihara, S. Ebisawa	1047
THE REDUCTION OF CLEAVAGE SURFACE ENERGY OF MUSCOVITE BY WATER VAPOR G. Trott, P.L. Gutshall, J.M. Phillips	1051
ELLIPSO-METRIC STUDIES OF ADSORPTION OF POLAR GASES ON AN OXIDIZED Si-SURFACE B. Thorstensen, O. Hunderi	1055
FIELD ION APPEARANCE POTENTIALS AND ENERGY DISTRIBUTIONS OF PRODUCTS OF DEHYDROGENATION REACTIONS H.J. Heinen, F.W. Röllgen	1059
SECONDARY ION EMISSION OF HYDROCARBON COMPOUNDS ON NICKEL A. Benninghoven, K.-H. Müller, M. Schemmer, P. Beckmann	1063
OBSERVATION OF SULFUR ON MOLYBDENUM SURFACES BY AES T. Miura	1067
ULTRAVIOLET PHOTOEMISSION STUDIES OF METHANOL ADSORBED ON Ru(110) G.B. Fisher, T.E. Madey, B.J. Waclawski, J.T. Yates, Jr.	1071
MOLECULAR CLUSTER CALCULATIONS OF OLEFINS ADSORBED ON A NICKEL SURFACE - I PERTURBED MOLECULAR APPROXIMATION J.T. Waber	1075
THE PREPARATION OF SAMPLES FOR TEM WITH A METHOD OF ION BEAM THINNING N. Ohmae, T. Miyawaki, F. Akiyama, T. Tsukizoe	1081
SURFACE REACTIONS OF Fe AND Cu WITH ORGANIC SULFIDES FOR PRODUCING LAYERS WITH ANTIFRICTION PROPERTIES K.P. Meyer	1085
INTERACTION OF NH ₃ WITH Mo AT LOW AND HIGH TEMPERATURES STUDIED BY THERMAL DESORPTION MASS SPECTROMETRY G. Bergeret, B. Tardy, M. Abon	1089

- REACTIVE SCATTERING OF MOLECULAR BEAMS ON SURFACES IN UHV
STUDIED BY MEANS OF EITHER SINGLE PULSE TECHNIQUE OR
SURFACE TEMPERATURE MODULATION
P. Steinbach, D. Hofer, J. Schütte A-2730
- RHEED AND AUGER STUDIES ABOUT CHLORINE REACTIONS ON COPPER,
NICKEL, IRON AND CHROMIUM
G. Dagoury, D. Vigner, Mc. Paul, J. Rousseau 1093
- REACTION- AND DESORPTION KINETICS OF STRONTIUM AND CHLORINE
ON A TUNGSTEN SURFACE
B. Biedermann, H.-W. Waßmuth 1097
- STUDY OF TUNGSTEN - WATER AND COPPER - WATER REACTIONS BY
FIELD EMISSION MICROSCOPY
D. Ramanathan, P. Vijendran 1101

3.9 Reactions Metal-Metal

- Al(111) SURFACES INVESTIGATED BY OPTICAL EXCITATION OF
SURFACE PLASMONS
T. Lopez-Rios 1105
- RUTHERFORD SCATTERING ANALYSIS OF THERMAL INTERACTIONS
BETWEEN AMORPHOUS OR CRYSTALLINE SILICON AND TANTALUM FILMS
S. Rigo, A. Turos, G. Velasco 1109
- CALCULATIONS FOR PREDICTING THE ORIENTATION OF LEAD ATOMS
ADSORBED ON TUNGSTEN SURFACES
T. Halicioğlu, H. Poppa 1113
- ULTRAVIOLET PHOTOEMISSION SPECTROSCOPY OF CHEMISORBED
Cu ATOMS AND OF Cu OVERLAYERS ON Zn
I. Abbati, L. Braicovich 1117
- A PAIRWISE INTERACTION APPROACH TO THE ADSORPTION OF
Cu ON W(100) AND W(110)
L.C.A. Stoop 1121
- CLASSICAL THERMAL DESORPTION SPECTROSCOPY AND ISOTHERMAL
DESORPTION SPECTROSCOPY USING AES: A COMPARISON OF THE
TWO METHODS APPLIED TO THE Ag/Si(III) SYSTEM
G. Le Lay, M. Manneville, R. Kern A-2731
- COPPER ADSORPTION ON THE (112) FACE OF TUNGSTEN
S. Mróz, A. Mróz, Z. Sidorski 1125

3.10 Various Surface Reactions

- VALENCE STATE AND INTERACTION OF PLATINUM AND GERMANIUM
ON γ -Al₂O₃ INVESTIGATED BY X-RAY PHOTOELECTRON
SPECTROSCOPY
R. Bouwman, P. Biloen 1129
- DECOMPOSITION OF H₂CO AND CH₃OH ON Ru(110) AND Ni(100)
J.T. Yates, Jr., D.²W. Goodman, T.E. Madey 1133
- UPS AND THERMAL DESORPTION STUDIES ON THE INTERACTION
OF AMMONIA WITH AN Fe(111) SURFACE
M. Grunze, G. Ertl 1137

3.11 O₂ and CO Adsorption

- ELECTRONIC STRUCTURE INVESTIGATION OF OXYGEN CHEMISORBED ON ALUMINUM
I.P. Batra, S. Ciraci 1141
- A UPS INVESTIGATION OF THE THERMAL AND ELECTRON INDUCED DISSOCIATION OF OXYGEN ADSORBED ON GaAs
W. Ranke 1145
- PHOTOEMISSION INVESTIGATION OF CHEMISORPTION ON FREE ELECTRON METALS
B. Feuerbacher 1149
- A COMPARISON OF THE Ir(111) AND Ir(110) SURFACES IN THE ADSORPTION AND REACTION OF OXYGEN AND CARBON MONOXIDE
W.H. Weinberg, W.F. Egelhoff, Jr., V.P. Ivanov, V.L. Tataurov, G.K. Boreskov 1151
- ABSOLUTE COVERAGES AND STICKING COEFFICIENTS: CO AND O₂ ON THE TUNGSTEN (110) PLANE
C. Wang, R. Gomer 1155
- ANGULAR RESOLVED PHOTOEMISSION STUDIES OF CHEMISORPTION ON METAL SURFACES
C. Guillot, Y. Ballu, J. Paigne, J. Lecante, P. Thiry, R. Pinchaux, Y. Petroff 1159
- SITE COMPETITION ON METAL SURFACES: AN ELECTRON SPECTROSCOPIC STUDY OF SEQUENTIAL ADSORPTION ON W(110)
M. Steinkilberg, D. Menzel 1163
- INFRARED SPECTROSCOPY OF CO ADSORBED ON PALLADIUM(100) AND (111) SURFACES
F.M. Hoffmann, A.M. Bradshaw 1167
- PHOTOIONIZATION CROSS-SECTIONS AND CHEMISORPTIVE BONDING OF CO ON IRIDIUM(OO1) AND (111) SURFACES
T. Rhodin, J. Kanski, C. Brucker, C. Seabury, G. Brodén, Z. Hurych, R. Benbow A-2731
- A LEED, XPS AND UPS STUDY OF THE ADSORPTION OF CO ON Cu(100)
C.R. Brundle, K. Wandelt 1171
- COMPOSITIONAL AND STRUCTURAL EFFECTS ON ADSORBATE BONDING TO METALS
D.T. Ling, D.M. Collins, K.Y. Yu, P.M. Stefan, W.E. Spicer 1175
- 3.12 Various Adsorption Problems
- DEHYDROGENATING ADSORPTION OF CYCLOHEXENE ON THE (111) NICKEL SINGLE CRYSTAL SURFACE
G. Dalmai-Imelik, J.C. Bertolini, J. Massardier, J. Rousseau, B. Imelik 1179
- EVIDENCE FOR THE STRUCTURES OF ADSORBED NH₃ AND H₂O ON Ru(OO1)
T.E. Madey, J.T. Yates, Jr. 1183
- ADSORPTION OF Te AND Hg ON Si(110) AND Ge(110) SURFACES
H.D. Hagstrum, T. Sakurai 1187

PHOTOEMISSION FROM CHEMISORBED In ON SURFACES OF COMPOUND SEMICONDUCTORS J.E. Rowe, G. Margaritondo	1191
RAMAN SPECTRA OF MOLECULES ADSORBED ON OXIDE CATALYSTS B.A. Morrow, A.H. Hardin	1193
ADSORPTION AND DESORPTION KINETICS OF H ₂ ON Ti B. Kasemo	1197
BINDING STATES OF H ₂ ON SINGLE CRYSTAL PLANES OF Pt R.W. McCabe, L.D. Schmidt	1201
DEMAGNETIZATION OF THE Ni(100) SURFACE BY HYDROGEN ADSORPTION M. Landolt, M. Campagna	A-2732
PARTIAL PHOTOYIELD STUDY OF ADSORBATE-SUBSTRATE INTERACTIONS: O ON Al R.Z. Bachrach, A. Bianconi, S.A. Flodstrom	1205
 3.13 <u>Desorption by Photons and Energetic Particles</u>	
PHOTODESORPTION AT HIGH PHOTON ENERGIES R. Franchy, D. Menzel	1209
LASER DESORPTION OF SURFACES IN ULTRAHIGH VACUUM R. Gauthier, M. Babout, C. Guittard	1213
THE TEMPERATURE DEPENDENCE OF THE SURFACE COMPOSITION AND ELECTRON AND ION INDUCED GAS DESORPTION COEFFICIENTS OF INCONEL 718 AND 316 L + N STAINLESS STEEL A. Mathewson, Marie-Hélène Achard	1217
 3.14 <u>Diffusion and Accommodation</u>	
TEMPERATURE DEPENDENT ANISOTROPY OF SURFACE SELF- DIFFUSION ON Ni(110) H.P. Bonzel, E.E. Latta	1221
TRANSPORT OF SURFACE ATOMS IN A TEMPERATURE GRADIENT M. Drechsler	1225
TANGENTIAL MOMENTUM ACCOMMODATIONS ON ADSORBED AND BARE METAL SURFACES R.G. Lord, L.B. Thomas	1229
 3.15 <u>Segregation</u>	
SURFACE SEGREGATION OF Sn IN Cu: DETERMINATION OF THE SEGREGATION LAYER THICKNESS J. Erlewein, S. Hofmann	A-2732
AES AND SXAPS STUDIES OF THE SEGREGATION OF Mn TO A STEEL SURFACE T.W. Haas, J.T. Grant, M.P. Hooker	A-2733
LEED AND EMISSION ELECTRON MICROSCOPIC INVESTIGATIONS OF CARBON SEGREGATIONS ON W(001) SURFACE E.B. Bas	1233

4. S U R F A C E I N T E R A C T I O N S

4.1 Etching and Deposition

- INDUSTRIAL APPLICATION OF ION ETCHING
R. Wechsung 1237
- STUDY OF THE D.C. REACTIVE SPUTTERING MECHANISMS OF AL N FILMS BY ION BEAM METHODS
A. Cachard, J.P. Dupin, J. Pivot, J. Tardy 1245
- SPUTTERED CADMIUM SULPHIDE FILMS IN MICROELECTRONICS DEVICES
H. Murray, A. Piel 1249
- COMPARISON OF ION BEAM ETCHING AND RF-DIODE BACKSPUTTERING PROCESSES WITH RESPECT TO THE ETCHING OF MICROSTRUCTURES
H. Dimigen, H. L uthje A-2733
- PLASMA PROCESSING - CLEANING - ETCHING DEPOSITION FOR ELECTRONIC APPLICATIONS
D.F. Bazzarre, F.W. Engle A-2734
- INTERACTION OF REACTIVE PLASMAS WITH SOLID SURFACES: A CRITICAL OVERVIEW
R.G. Frieser, R.S. Horwath, J.A. Bondur 1253
- A MASS SPECTROMETRIC STUDY OF A CF₄ PLASMA ETCHING GLOW DISCHARGE
J.W. Coburn, E. Kay 1257
- THE TREATMENT OF ORGANIC SURFACE FILMS BY A GLOW DISCHARGE AND THEIR DETECTION BY THIN FILM NUCLEATION
C.J. Robinson, G.L. Thomas 1261
- ##### 4.2 Interaction of Photons with Solids
- TWO PHOTON PHOTOELECTRIC EFFECT IN THE SURFACE PLASMA RESONANCE OF ALUMINIUM
H.W. Rudolf, W. Steinmann 1265
- ANGULAR RESOLVED PHOTOEMISSION OF (SN)_x SINGLE CRYSTAL SURFACES
L. Ley, H.J. Stolz, T. Grandke, J. Azoulay A-2734
- SELECTIVE ENHANCEMENT OF THE ELECTRON EMISSION QUANTUM YIELD IN PHOTOCATHODES BY CONTROLLED EXCITATION OF SURFACE PLASMONS
G. Hincelin, A. Septier 1269
- THEORY OF PHOTOEMISSION FROM LOCALIZED LEVELS IN SOLIDS: INELASTIC SCATTERING AND SURFACE EFFECTS
M. Sunji c, Z. Crljen, D. Sokcevi c 1273
- PHOTODESORPTION FROM NIOBIUM SURFACES
D. Lichtman, T. Lin 1277
- THEORY OF INFRARED ABSORPTION IN COMPOSITE CRYSTALS: SHAPE AND AGGREGATION EFFECTS
R. Brako, M. Sunji c 1281

4.3 Interaction of Electrons with Solids

- HIGH ELECTRON ENERGY ESD OF H^+ AND F^+ FROM STAINLESS
STEEL, PLATINUM AND NIOBIUM
D. Lichtmán, M.J. Drinkwine 1285
- TWO-DIMENSIONAL Pd LAYER GROWTH ON W(110) AND STEPPED
W PLANES BY SURFACE DIFFUSION
R. Butz, H. Wagner 1289
- AN INTERPRETATION OF AUGER VALENCE TRANSITIONS IN
OXIDES OF THIRD ROW ELEMENTS
J.S. Murday, D.E. Ramaker, M.K. Bennett, N.H. Turner 1293
- SURFACE STUDIES USING SPIN POLARIZED ELECTRONS
D.T. Pierce, R.J. Celotta, W.N. Unertl 1297
- THEORY OF ADSORBATE VIBRATIONAL EXCITATION BY INELASTIC
ELECTRON SCATTERING
D.M. Newns 1301
- SURFACE AND SUBSURFACE SOURCE EFFECTS IN THE LINEARIZED
CASCADE
E.N. Sickafus 1305

4.4 Interaction of Protons with Solids

- THE INFLUENCE OF SURFACE CONDITIONS ON THE CHARGE STATE
OF BACKSCATTERED HYDROGEN
H. Verbeek, W. Eckstein 1309
- DETERMINATION OF TWO PARAMETERS OF A DISTRIBUTION OF
FOREIGN ATOMS IN BULK MATERIAL BY PROTON INDUCED X-RAYS
O. Benka, M. Geretschläger, A. Kropf 1313
- PROTON SCATTERING IN THIN POLYCRYSTALLINE GOLD LAYERS,
DAMAGED BY ION BOMBARDMENT
G. Thieme A-2735

4.5 Interaction of Ions and Atoms with Solids

- ANGULAR AND VELOCITY DISTRIBUTIONS IN MOLECULAR BEAM
SCATTERING AT SOLID SURFACES
G. Comsa 1317
- INVESTIGATIONS ON ION-INDUCED SECONDARY ELECTRON EMISSION
FROM OXYGEN COVERED SURFACES
F. Thum, W.O. Hofer A-2735
- SECONDARY ELECTRON EMISSION OF ALLOYS AND VACUUM
EVAPORATED THIN OXIDE FILMS INDUCED BY POSITIVE
AND NEGATIVE IONS
R. Paquin, M. Baril A-2736
- SECONDARY ELECTRON EMISSION FROM SOLID TARGETS UNDER
BOMBARDMENT WITH 20 KEV H^+
H. Nakamura, T. Kawamura, M. Ishii, T. Ichinokawa 1325
- SIMULTANEOUS SIMS-AES MEASUREMENTS FOR PARTIALLY
OXIDIZED ALUMINUM SURFACES
T. Narusawa, S. Komiya 1329
- SCATTERING OF ATOMIC BEAMS BY SOLID SURFACES AT LOW TEMPERATURES
A.M. Krasovskii, V.A. Belyi 1333

- STUDY OF THE MOBILITY OF A TWO-DIMENSIONAL FLUID BY NEUTRON QUASI ELASTIC SCATTERING
J.P. Coulomb, M. Bienfait, P. Thorel 1337
- SECONDARY EMISSION FROM A CuBe TARGET DUE TO BOMBARDMENT WITH PARENT AND FRAGMENT IONS OF AMMONIA AND PHOSPHINE
T.D. Märk 1341
- MOLECULAR BEAM STUDY OF THE NUCLEATION OF WATER ON GOLD
M.J. Barger, L.L. Levenson A-2736
- ELASTIC AND INELASTIC SCATTERING OF ^{20}Ne AND ^{22}Ne FROM A(OO1) SURFACE OF LITHIUM FLUORIDE
F. Tommasini, U. Valbusa, G. Vidali A-2737
- HOW IONIC IS Na AT A PARTIALLY COVERED W(110) SURFACE
E.G. Overbosch, S. Tomoda, J. Los 1345
- EXPERIMENTAL EVIDENCE OF CHANNEL COUPLING IN THE DIFFRACTION OF GAS ATOMS FROM CRYSTAL SURFACES
H. Hoinkes, L. Greiner, H. Wilsch 1349
- INTERACTION OF SPIN SELECTED ATOMIC HYDROGEN WITH SURFACES
D. Bassi, S. Iannotta, S. Marchetti, R. Penco, G. Scoles, H.Nahr A-2737
- SELECTIVE ADSORPTION OF ^3He AND ^4He ON CLEAN NaF(OO1) SURFACES
G. Derry, D. Wesner, S.V. Krishnaswamy, M.W. Cole, D.R. Frankl 1353
- MOLECULAR BEAM DIFFRACTION OF He AND H_2 : TWO DIFFERENT WAYS OF PROBING THE (OO1) FACE OF NiO
P. Cantini, G.P. Felcher, R. Tatarek 1357
- THE DEBYE-WALLER FACTOR IN THE ELASTIC BACKSCATTERING OF A HELIUM BEAM FROM THE (111), (100) AND (110) FACES OF COPPER
G. Armand, J. Lapujoulade, Y. Lejay 1361
- REACTIVE AND NONREACTIVE SCATTERING OF CO AND O_2 FROM Pd(111)
T. Engel, G. Ertl 1365
- AUGER NEUTRALIZATION OF IONS AT SOLID SURFACES
K. Koyama, S. Horiguchi, Y.H. Ohtsuki 1369
- THE CHARACTERIZATION OF RANDOMLY STEPPED SURFACE OF COPPER BY HELIUM BACKSCATTERING
Y. Lejay, J. Lapujoulade 1373
- SURFACE PHONONS FROM ATOM SCATTERING ANGULAR DISTRIBUTIONS: A THEORETICAL ANALYSIS
G. Benedek, G. Seriani A-2738
- DIFFRACTION OF MOLECULAR BEAMS FROM A LOW TEMPERATURE METAL SURFACE
G. Boato, P. Cantini, R. Tatarek 1377
- 4.6 Ion Scattering (High and Medium Energy)
- RECOIL SPECTROSCOPY OF OXYGEN ON W(100)
S. Prige, H. Niehus, E. Bauer 1381
- SCATTERING OF He, H_2 , AND D_2 FROM Au(111) SURFACES
D.R. Miller, J.M. Hörne 1385

- SCATTERING EXPERIMENTS OF Li-IONS FROM SINGLE CRYSTAL METAL SURFACES AT ENERGIES FROM 10 TO 50 eV AND THEIR COMPUTER SIMULATION
U. Gerlach-Meyer, E. Hulpke 1389
- A PULSED BEAM TECHNIQUE FOR THE DETERMINATION OF THE DESORPTION PARAMETERS OF ADSORBED SPECIES
G. Bolbach, J.C. Blais, A. Brunot, M. Cottin, A. Marilier 1393
- SIMULATION OF ION SCATTERING BY ATOMIC CHAINS ON REAL SOLID SURFACE
S.L. Nizhnaya, E.S. Parilis, N.Yu. Turaev 1397
- SURFACE COMPOSITION OF SOME SELECTED GROUP VIII/Au AND GROUP VIII/Sn ALLOYS
P. Biloen, R. Bouwman, R.A. van Santen, H.H. Brongersma 1401
- 4.7 Implantation and Sputtering
- ION IMPLANTATION FOR MICROELECTRONICS
G. Dearnaley 1405
- COMPUTER SIMULATION OF SPUTTERING
R. Shimizu 1417
- THE CONTROLLED INCORPORATION OF FOREIGN ELEMENTS IN METAL SURFACES BY MEANS OF QUANTITATIVE ION IMPLANTATION
W.H. Gries 1425
- CONCENTRATION PROFILES OF Cr, Ni AND Cu IMPLANTED INTO MILD STEEL
M. Iwaki, S. Namba, K. Yoshida, N. Soda, T. Sato, K. Yukawa 1429
- GALVANO-MAGNETO-REKOMBINATION EFFECTS IN ION-BOMBARDED SURFACE LAYERS OF SOLIDS
A. Lesauskas, J. Navickas, L. Pranevicius, V. Riauka 1433
- QUASI-THERMODYNAMICAL DESCRIPTION OF PARTICLE EMISSION DUE TO SPUTTERING
J. Antal 1437
- SPUTTERING MODEL USING MONTE-CARLO METHOD FOR ESCAPE ANALYSIS
V. Colomer-Viadet, M. Rodriguez-Vidal, F. Sanchez-Quesada, J.A. Valles-Abarca 1441
- BUBBLE PROPAGATION IN ION IMPLANTED GARNET FILMS
L. Pranevicius, A. Markelis, A. Antonov 1445
- THE METAL-DIELECTRIC TRANSITION PRESSURE IN REACTIVE SPUTTERING
R.N. Castellano 1449
- MICRO ION MILLING TECHNIQUES REVIEWED FOR PRODUCING HIGH RESOLUTION DEVICES FOR SURFACE WAVE ACOUSTICS, MAGNETIC DOMAIN MEMORIES, FIELD TRANSISTORS AND INTEGRATED OPTICS
B. Kegel, G. Liebel 1453
- SPUTTER ETCHING OF CONDUCTORS AND RESISTORS FOR M.I.C.'s WITH DIMENSIONS BELOW 10μ
C.L. Misiano, E. Simonetti 1457
- COMPOSITION AND ISOTOPE VARIATIONS IN SPUTTERING AS A FUNCTION OF THE EJECTION ANGLE
G.K. Wehner, R.R. Olson, M.E. King 1461

- THE ANGULAR DISTRIBUTION OF SPUTTERED PARTICLES MEASURED BY RBS ANALYSIS OF THE COLLECTED PARTICLES
B. Emmoth, M. Braun 1465
- ENERGYSPECTRUM OF Na SPUTTERED FROM NaI MEASURED WITH AN OPTICAL SPECTROMETER
R. Bruckmüller, W. Husinsky, P. Blum 1469
- FLUORESCENCE SPECTROSCOPIC MEASUREMENT OF THE RELATIVE SPUTTERING YIELD OF METALS AS A FUNCTION OF OXIDATION STATE AND Ar⁺ DOSE
A. Elbern, P. Mioduszewski, E. Hintz 1473
- SPUTTERING YIELDS OF GRAPHITE, COPPER, USING TORSION MICROBALANCE TECHNIQUE WITH keV REGION H⁺, He⁺ AND Ar⁺
K. Akaishi, A. Miyahara, Z. Kabeya, M. Komizo, T. Gotoh 1477
- USE OF MeV He⁺ BACKSCATTERING AND (P, α) REACTIONS TO STUDY THE SPUTTERING OF LiF FILMS BOMBARDED WITH NOBLE GAS UP TO 40 keV
J. Tardy, J. Pivot, J.P. Dupin, A. Cachard 1481
- SPUTTERING AND THE CONES FORMATION OF Cu BASED ALLOYS
N. Bibić, T. Nenadović, B. Perović 1485
- EFFECTS OF ENHANCED DIFFUSION ON PREFERRED SPUTTERING OF HOMOGENEOUS ALLOY SURFACES
P.S. Ho, J.E. Lewis, H.S. Wildman A-2738
- FORMATION OF ALTERED LAYER ON THE SPUTTERED SURFACES OF Cu-Ni ALLOY AT LIQUID NITROGEN TEMPERATURE
T. Koshikawa, K. Goto, N. Saeki, R. Shimizu 1489
- STUDY OF PREFERENTIAL SPUTTERING IN COEVAPORATED Cu-Ni SAMPLES AT LOW TEMPERATURE
K. Goto, T. Koshikawa, K. Ishikawa, R. Shimizu 1493
- TOTAL AND DIFFERENTIAL SPUTTERING YIELDS OF Ta- AND Nb-OXIDE FOR 100-600 eV Ar⁺ MEASURED WITH SPUTTERED NEUTRAL MASS SPECTROSCOPY
H. Oechsner, H. Schoof, E. Stumpe 1497
- SURFACE PROPERTIES OF SPUTTER ETCHED FLUOROPOLYMERS
T. Moriuchi, S. Yamamoto, M. Ezo, H. Tabata, K. Uemori, F. Shigeta, Y. Ohya, A. Tsumura, J. Nakai 1501
- DAMAGE OF GRAPHITE SURFACES RESULTING FROM ION BOMBARDMENT, STUDIED BY MEANS OF ELECTRON MICROSCOPY, RAMAN- AND X-RAY PHOTOELECTRON SPECTROSCOPY
S. Veprek, A.P. Webb, A. Portmann, H.J. Stuessi, R. Schär, J. Brunner, M. Thueler 1505
- EROSION OF IRON AND NICKEL BASED ALLOYS BY MONO- AND MULTI-ENERGETIC LIGHT ION BOMBARDMENT IN THE ENERGY RANGE FROM 0.1-8keV
J. Bohdanský, H.L. Bay, J. Roth 1509
- THE EFFECT OF OXYGEN ADSORPTION ON ION AND PHOTON EMISSION FROM ION BOMBARDED ELEMENTAL TARGETS
R.J. MacDonald 1513
- REACTIVE SPUTTER-THINNING OF LARGE DIAMONDS WHILE PRESERVING EXCELLENT CRYSTALLINE PERFECTION
E.L. Garwin 1517

5. T H I N F I L M S

5.1 Deposition and Microfabrication Techniques

A CRITICAL REVIEW OF HIGH RESOLUTION ULTRA-VIOLET, X-RAY AND ELECTRON BEAM MICROFABRICATION TECHNIQUES A.N. Broers	1521
TRENDS IN THIN FILM DEPOSITION METHODS Chr. Weissmantel	1533
ION DEPOSITION TECHNIQUES FOR INDUSTRIAL APPLICATION S. Schiller, U. Heisig, K. Goedicke	1545
PRODUCTION OF THICK FILMS BY PVD TECHNIQUES AND THEIR APPLICATIONS R.F. Bunshah	1553
THICK FILM DEPOSITION BY PLASMA JET IN RAREFIED GAS J.F. Godet, J. Guilly, P. Guiraldenq, G. Lassau	1559
DEPOSITION OF OXIDES AND NITRIDES BY NEUTRALIZED ION BEAM SPUTTERING J.R. Sites	1563
SOURCE CONFIGURATIONS FOR THE DEPOSITION OF UNIFORM THIN FILMS ONTO A MOVING WEB J.A. Dobrowolski	1567
IN LINE DEPOSITION OF THIN FILM OF Ta ₂ N - DATA ANALYSIS BY COMPUTER C. Val	A-2739
VACUUM DEPOSITION OF MULTILAYER INTERFERENCE FILMS ON LONG FLEXIBLE PLASTIC FILM FOR SOLAR HEAT REFLECTION A. Isao, K. Nakamura	1571
CO-SPUTTERED INHOMOGENEOUS OPTICAL COATING C. Misiano, F. Marcelja, E. Simonetti, C. Mancini	A-2739
SPUTTERING PLANT FOR THE DEPOSITION OF Au, Ag AND Cu FILMS ON GLASS SHEETS UP TO 3.00 BY 4.00 METERS H.J. Gläser	1575
IMPROVED ION BEAM SPUTTERING TECHNIQUE AND ITS APPLICATION G. Gautherin, C. Schwebel, Chr. Weissmantel	1579
HIGH RATE MAGNETRON SPUTTERING R.J. Hill, R. Cormia, P. McLeod	1583
AN ELECTRON BEAM EVAPORATOR FOR BAND COATING K. Brill, W. Grothe	1587
SELF-SPUTTERING PHENOMENA IN HIGH-RATE COAXIAL CYLINDRICAL MAGNETRON SPUTTERING (II) T. Tsukada, T. Misumi, N. Hosokawa	1591
HIGH RATE MAGNETRON SPUTTER DEPOSITION D.B. Fraser	A-2740
ION PLATING IN INDUSTRIAL THIN FILM PRODUCTION H.K. Pulker, R. Buhl, E. Moll	1595
DESIGN AND OPERATION OF AN ALUMINISING PLANT TO COAT MIRRORS FOR A 3.9 M TELESCOPE H. Wehner, H. Gollnow, T.I. Putner, B.J. Williams	1599

- THE VAPOURIZED-METAL CLUSTER ION SOURCE AND ITS APPLICATION TO FILM FORMATION
T. Takagi, I. Yamada, A. Sasaki, S. Itho, M. Ozawa, M. Kodama, K. Tominaga, T. Hattori 1603
- ION-PLATING AND VAPOUR DEPOSITION OF STEEL SUBSTRATES WITH COPPER IN A TECHNICAL VACUUM EQUIPMENT
R. Wilberg, G. Blasek, D. Schulze, W. Teubner A-2740
- MASS SPECTROMETER-CONTROLLED ION BEAM PLATING
N. Ohmae, T. Nakai, T. Tsukizoe 1607
- INTRODUCING PLASMA ENRICHED DEPOSITION
G.F. Garfield 1611
- CO-SPUTTERING OF ALLOYS USED IN HYBRID MICROELECTRONICS
M. Moulin, M.J. Joly 1615
- 5.2 Growth and Structure of Thin Films
- CRYSTALLIZATION OF DIELECTRIC FILMS ON SEMICONDUCTORS
L.N. Alexandrov, F.L. Edelman 1619
- THIN FILM DEPOSITION ON ARTIFICIAL CRYSTALLIZATION CENTRES
E.I. Tochitsky, V.E. Obukhov 1623
- GRAVIMETRIC AND ELECTRON MICROSCOPIC STUDY OF NUCLEATION KINETICS OF Pb AND Ag FILMS GROWN BY VACUUM DEPOSITION
S. Ozawa, S. Fujiwara 1627
- THE STRUCTURE OF Fe-Si FILMS DEPOSITED BY RF SPUTTERING
N. Ainslie, F.M. d'Heurle, M. Entner, E. Klokholm 1631
- REALIZATION OF THE THERMOELECTRIC POWER MEASUREMENTS IN THE IN SITU ELECTRON MICROSCOPY OF THIN FILMS
A. Barna, P.B. Barna, Gy. Radnóczy, G. Stark, P. Thomas, L. Tóth 1635
- STUDY OF THE EFFECTS OF FOREIGN MATERIALS BUILT-IN AS SECOND COMPONENTS DURING THE FORMATION OF THIN METAL FILMS
A. Barna, P. Barna, Gy. Radnóczy, L. Tóth A-2741
- ANALYSIS OF MARKER MOTION IN THIN FILM SILICIDE FORMATION
K.N. Tu A-2741
- THIN FILM ELECTRODES FOR LIQUID CRYSTAL CELLS
R. Chabicovsky 1639
- INTRINSIC STRESS/MICROSTRUCTURE INVESTIGATION OF ZnS FILMS
R.P. Wenz, R.W. Hoffman 1643
- GROWTH AND STRUCTURE OF VACUUM DEPOSITED GERMANIUM FILMS ON MICA
S.A. Semiletov, A.A. Tichonova 1647
- SEGREGATION IN THIN TRANSITION-METAL FILMS
J.L. Morán-López, G. Kerker, K.H. Bennemann 1651
- MIGRATION OF GOLD PARTICLES ON SODIUM CHLORIDE SUBSTRATE AT ROOM TEMPERATURE
C.R. Henry, C. Chapon, B. Mutaftschiev A-2742
- INFLUENCE OF THE DISORDER ON THE ZnTe REFLECTION SPECTRA
E. Czarnecka-Such, A. Kisiel, J. Szczyrbowski 1655

MOLECULAR BEAM STUDY OF THE GROWTH OF THIN BISMUTH FILMS A. Kawazu, Y. Saito, G. Tominaga	1659
KINETICS OF GROWTH AND PROPERTIES OF HIGH-ALLOY POLY- CRYSTALLINE Si THIN FILMS V.M. Koleshko, A.A. Kovalevsky	1663
THE PREPARATION AND PROPERTIES OF AMORPHOUS CARBON FILMS GROWN UNDER ION IMPACT IN AN R.F. DISCHARGE S.M. Ojha, L. Holland	1667
INFLUENCE OF ION IMPLANTATION INTO THE SOURCE OF EVAPORATION OR GROWING STRUCTURE ON THE PROPERTIES OF VACUUM DEPOSITED THIN FILMS L. Pranevicius, K. Bilius, J. Dudonis, A. Meskauskas	1671
CHANGES DUE TO DEPOSITION RATE IN THE DENSITY AND DISTRIBUTION (IN ACTIVATION ENERGY) OF DEFECTS IN VACUUM-DEPOSITED THIN FILMS V.D. Das, H.U. Kumar	1675
NUCLEATION AND GROWTH OF Al-FILMS ON CARBON LAYERS G. Dumpich, E.F. Wassermann	1679
 5.3 <u>Epitaxial Films</u>	
GROWTH AND STRUCTURE OF THE EPITAXIAL FILMS L.N. Aleksandrov	1681
GROWTH MODES OF EPITAXIAL FILMS OF IRON ON Ni(001) AND NICKEL ON Fe(001) T. Kanaji, A. Suzuki, T. Urano	1689
SURFACE MORPHOLOGY OF EVAPORATED ALUMINUM FILMS ON GaAs(110) SURFACES T. Hanawa, N. Miyata, K. Oura	1693
GROWTH OF EPITAXIAL MgO FILMS BY ELECTRON-BEAM EVAPORATION M.O. Aboelfotoh, W.A. Pliskin	1697
THE STRUCTURE OF REFRACTORY METAL FILMS CONDENSED IN VACUUM V.M. Ijevlev, V.S. Postnikov	1701
MOLECULAR BEAM EPITAXY OF GaAs AND SIMULTANEOUS CHARACTERIZATION BY RHEED, SIMS, AND AES TECHNIQUES K. Ploog, A. Fischer, F. Raisch	1705
EPITAXIAL GROWTH OF RF-SPUTTERED HgS FILMS ON NaCl SUBSTRATES T. Nakada, A. Kunioka	1709
EFFECTS OF AIR-CLEAVED AND VACUUM-CLEAVED SURFACES OF MICA ON EPITAXY T. Ota	1713
PREPARATION OF CONTINUOUS FILMS OF Te THIN CRYSTALS BY VACUUM EVAPORATION ONTO THE SURFACES OF ELECTRON IRRADIATED KBr CRYSTALS I. Ogura, S. Nagashima	1717
EFFECTS OF ELECTRIC FIELDS ON THE GROWTH PROCESSES OF GOLD FILMS FORMED ON NaCl SURFACES BY R.F. ION PLATING Y. Murayama, K. Kashiwagi	1721
VACUUM EPITAXY OF A ^{IV} B ^{VI} COMPOUNDS ON LiNbO ₃ S.A. Semiletov, E.V. Rakova	1725

- ARTIFACTIVE CHANGES AND EPITAXY OF SILVER FILMS ON SINGLE CRYSTAL SUBSTRATES
A. Gutmann, K. Hayek 1729
- THE SURFACE STRUCTURE OF EPITAXIALLY GROWN COBALT OXIDE FILMS
A. Ignatiev, B.W. Lee, M.A. Van Hove 1733
- CONDENSATION OF Pd ON W(110) SINGLE CRYSTAL PLANE
D. Paraschkevov, W. Schlenk, R.P. Bajpai, E. Bauer 1737
- PREFERENTIAL EPITAXY OF II-VI COMPOUND FILMS PRODUCED ON ELECTRON-BOMBARDED NaCl SUBSTRATES
G. Shimaoka A-2742
- INFLUENCE OF BULK IMPURITIES ON THE ORIENTED GROWTH OF VACUUM DEPOSITED Au PARTICLES ON ALKALI HALIDE SUBSTRATES
M.I. Birjega, V. Topa, V. Teodorescu, C. Sarbu 1741
- 5.4 Mechanical Properties of Thin Films
- APPLICATION OF TITANIUM CARBIDE HARD THICK FILMS DEPOSITED BY THE LPPD PROCESS TO HIGH SPEED STEEL TOOLS
Y. Nozawa, K. Inagawa, S. Komiya, K. Nakamura 1745
- INVESTIGATION OF RF SPUTTER DEPOSITED THIN FILMS BY DOUBLE QUARTZ TECHNIQUE
I. Szabó, A. Bán 1749
- STRUCTURE OF EVAPORATED, ION PLATED AND RF-SPUTTERED CHROMIUM FILMS
K.Å.B. Andersson, H.T.G. Nilsson, P.J. Nordlander, S.-E. Karlsson 1753
- CHEMICAL COMPOSITION OF INTERFACE THIN FILMS FORMED DURING FRICTION OF METALLIC SURFACES
H. Montes, J.M. Martin, P. Bouchaib 1757
- MECHANICAL STRESSES IN DIELECTRIC FILMS MEASURED WITH A NEW OPTICAL MONITORING DEVICE
J. Mäser, R. Buhl, H.K. Pulker 1761
- CORRELATION BETWEEN CHANGES OF INTERNAL STRESS AND ELECTRON MICROSCOPIC STRUCTURE OF THIN Ag FILMS
J. Mäser, H.L. Gruber, R. Abermann 1765
- THE NANOTENSILOMETER - AN ACCURATE, SENSITIVE TENSILE TEST INSTRUMENT
C.G. Andeen, C.W. Hagerling, R.W. Hoffman 1769
- 5.5 Optical Properties of Thin Films
- RECENT ADVANCES IN THE STUDY OF THE PROPERTIES OF THIN FILMS
F. Abelès 1773
- OPTICAL THIN FILM WAVEGUIDES
W.D. Westwood 1781
- INFLUENCE OF THE CRYSTALLOGRAPHIC STRUCTURE OF TiO₂ ANODIC FILMS ON THEIR OPTICAL PROPERTIES
G. Blondeau, M. Froelicher, M. Froment, A. Hugot-Le Goff 1789

FABRY PEROT FILTERS WITH SiO_2 - TiO_2 COMBINATION R. Apter, H. Sennhauser, A. Razbořsek	1793
LATTICE VIBRATION SPECTRA OF EPITAXIALLY GROWN FILMS OF AlN ON SILICON BY REACTIVE EVAPORATION S. Yoshida, S. Misawa, A. Itoh	1797
ELLIPSOMETRICAL STUDIES ON PURE AND CO COVERED NICKEL FILMS U. Merkt, S. Ritz, P. Wissmann	1801
OPTICAL INVESTIGATIONS OF COPPER, NICKEL AND COPPER- NICKEL LAYERS H. Bangert, H. Leskova	1805
OPTICAL PROPERTIES AND STRUCTURE OF Au UNBACKED FILMS J. Casset	1809
EFFECTS OF INTERBAND TRANSITIONS IN THIN FILMS OF CALCIUM AND STRONTIUM J. Marfaing	A-2743
SOLAR-SELECTIVE SURFACE OF ZIRCONIUM CARBIDE FILM H. Ihara, S. Ebisawa, A. Itoh	1813
VALIDITY OF A DESCRIPTION OF THE OPTICAL AND PHOTOELECTRIC PROPERTIES OF THIN SILVER FILMS WITH LOCAL PARAMETERS G. Chabrier, J.P. Goudonnet, P. Vernier	1817
PRODUCTION OF ABSORPTION-FREE OPTICAL MULTILAYER COATINGS OF $\text{SiO}_2/\text{TiO}_2$, UTILISING A NOVEL METERING SYSTEM H. Schwiecker	A-2743
FUNDAMENTAL REFLECTIVITY SPECTRA OF Cd_3As_2 THIN FILMS IN THE 1-5.9 eV ENERGY RANGE K. Karnicka-Mořcicka, A. Kisiel, L. Zdanowicz	1821
CHARACTERIZATION OF SELECTIVE SOLAR ABSORBER COATINGS P. Braun, G. Betz, W. Färber, G.K. Wehner	1825
DESIGN OF SEMITRSPARENT WIDEBAND DIELECTRIC MIRRORS WITH DISPERSIVE AND ABSORBING MATERIALS J. Kuroř, Z. Leř	1829
5.6 <u>Electrical and Magnetic Properties of Thin Films</u>	
ELECTRON EMISSION FROM THIN FILMS H. Schade, J.J. Hanak	1833
THE HALL COEFFICIENT FACTOR OF INDIUM ANTIMONIDE THIN FILMS S. Husa	1837
R.F. SPUTTERED THIN FILMS OF NOMINALLY Fe-6.5wt%Si ALLOY N.G. Ainslie	1841
ELECTRICAL PROPERTIES OF HIGHLY NITRIDED TANTALUM THIN FILMS K. Takiguchi, S. Ogawa, T. Hasegawa	1845
ELECTRICAL PROPERTIES AND CRYSTALLIZATION PROCESS OF AMORPHOUS ANTIMONY FILMS A. Kinbara, M. Ohmura, K. Uozumi	1849
THE ELECTRICAL PROPERTIES AND THERMOELECTRIC POWER OF THIN FILMS OF $\text{I}_a\text{III}_a\text{NaTl}$ COMPOUNDS H. Kezuka, S. Takei, K. Iwamura	1853

OHMIC AND THERMOELECTRIC PROPERTIES OF Cu-Ni FILMS OBTAINED BY U.H.V. CONTROLLED COEVAPORATION G. Richon, J. Gouault	1857
CHARACTERISTICS OF THE ELECTRICAL AND STRUCTURAL EVOLUTION OF NICKEL-BORON ALLOYS J. Fléchon, P.A. Kuhnast, F. Machizaud	1861
INFLUENCE OF THE CONCENTRATION OF IMPURITIES ON THE ELECTRICAL CONDUCTION IN THIN FILMS OF MgF_2 AND AlF_3 Y. Danto, A.S. Barriere	1865
THE INFLUENCE OF CHEMISORBED GASES ON THE FERROMAG- NETIC RESONANCE OF NICKEL AND IRON THIN FILMS J.K. Blum, W. Göpel	1869
INFLUENCE OF THE FILM-SUBSTRATE SYSTEM CHARGE STATE ON ELECTRICAL CONDUCTIVITY OF Al THIN FILMS V.M. Koleshko	1871
SELF-CONSISTENT CALCULATIONS FOR TRANSITION METAL FILMS O. Jepsen, J. Madsen, O. Krogh Andersen	A-2744
OXIDATION OF Ni-Fe THIN FILMS A. Gangulee, P.S. Ho	A-2744
EFFECT OF PREPARATION CONDITIONS ON SOME PROPERTIES OF THIN $CdF_2:Eu$ FILMS N.A. Vlasenko, L.F. Gudymenko, M.P. Lisitsa, N.M. Torchun, V.S. Khomchenko	1875
EVAPORATED CARBON FILMS G.K. Bhagavat, K.D. Nayak	1879
ELECTRICAL PROPERTIES OF ELECTRON-BEAM EVAPORATED AMORPHOUS SILICON THIN FILMS G. Rieder, D. Schuöcker	1883
MAGNETIC REARRANGEMENTS IN THIN FILMS AND SURFACE MAGNONS J.C.S. Levy, Diep-The-Hung	1887