

# VOLUMEN I

## DEPARTAMENTO INVESTIGACION BASICA

Trabajos efectuados en el Centro Atómico Bariloche y publicados con referato

-1957-

### Fisicoquímica

✓ -WIDE-RANGE THERMAL CONVECTION MANOMETER  
J.A. McMillan & T. Buch  
The Review of Scientific Instruments, 28, N° 11, 881 (1957)

-1959-

### Colisiones Atómicas

✓ -DESIGN AND PERFORMANCE OF A HOT CATHODE MAGNETICALLY COLLIMATED ARC  
DISCHARGE ION SURFACE  
M. Abele & W. Meckbach  
The Review of Scientific Instruments, 30, N° 5, 335 (1959) ✓

-1960-

### Teoría

✓ -THE THEORY OF PHOTON PACKETS AND THE LENNUIER EFFECT  
L.M. Falicov  
Nuovo Cimento, 16, N° 2, 247 (1960)

-1961-

### Metales

✓ -ON THE YIELD STRESS IN b.c.c. METALS  
G. Schoeck  
Acta Metallurgica, 9 N° 4, 382 (1961)

✓ -STEADY STATE CREEP IN A CuAu<sub>3</sub> ALLOY  
R.G. Davies  
Transactions of the Metallurgical Society of AIME, 221, 1280 (1961)

-1962-

### Metales

✓ -CORRELATION BETWEEN DISLOCATION LENGTH AND DENSITY  
G. Schoeck  
Journal of Applied Physics, 33, N° 5, 1745 (1962)

### Teoría

✓ -DEFINITION OF NUCLEAR POTENTIALS FROM DOUBLE DISPERSION RELATIONS IN FIELD  
THEORY AND POTENTIAL SCATTERING  
F. Morey  
Nuovo Cimento, Serie X, 24, 585 (1962)

-1964-

Metales

- ✓ -THE ACTIVATION ENERGY OF HIGH TEMPERATURE INTERNAL FRICTION  
G. Schoeck, E. Bisogni & J. Shyne  
Acta Metallurgica, 12, N° 12, 1466 (1964)
- ✓ -REMARKS ON A "NEW THEORY OF WORK-HARDENING"  
G. Schoeck  
Philosophical Magazine, 9, N° 98, 335 (1964)

-1965-

Metales

- ✓ -THE ACTIVATION ENERGY OF DISLOCATION MOVEMENT  
G. Schoeck  
Physica Status Solidi, 8, 499 (1965)

Teoría

- ✓ -A RENORMALIZED GHOST-FREE LEE MODEL  
A. García & F. Morey  
Nuovo Cimento, Serie X, 37, 9 (1965)
- ✓ -ABSORCION DE HIPERSONIDO EN DIELECTRICOS A TEMPERATURAS BAJAS  
B.R. Alascio & R.M. Carrillo  
Acta Científica Venezolana 16, N° 3, 95 (1965)

-1966-

Metales

- ✓ -ON THE RECOVERY AND ORDERING PROCESSES OF COLD WORKED Ni-Fe ALLOYS  
C. Varotto & A.E. Vidoz  
Physica Status Solidi, 18, 49 (1966)
- ✓ -REMARKS ON A THEORY OF LINEAR STRAIN HARDENING  
G. Schoeck  
Philosophical Magazine, 13, N° 123, 635 (1966)
- ✓ -NUCLEATION OF DEFORMATION TWINS IN F.C.C. METALS  
G. Schoeck  
Physica Status Solidi, 13, 127 (1966)
- ✓ -CREEP AT HIGH TEMPERATURES IN Ni-Fe ALLOYS  
C.A. Pampillo & A.E. Vidoz  
Acta Metallurgica, 14, 313 (1966)

## Resonancias Magnéticas

- ✓ -EPR OF PENTAVALENT MOLYBDENUM IN LIQUID SOLUTIONS  
M.M. Abraham, J.P. Abriata, M.E. Foglio & E. Pasquini  
Journal of Chemical Physics, 45, N° 6, 2069 (1966)

## Teoría

- ✓ -DO THE COMMUTATION RULES FOR COUPLED FIELDS DEPEND ON THEIR INTERACTION?  
L. Masperi  
Supplemento al Nuovo Cimento, Serie I, 4, 1 (1966)
- ✓ -COHERENCE PROPERTIES OF TWO-PHOTON SYSTEMS  
L. Menegozzi  
Supplemento al Nuovo Cimento, Serie I, 4, 15 (1966)
- ✓ -SERIES DEVELOPMENT OF THE SOLUTION OF AN EIGENVALUE PROBLEM  
A. López  
Acta Physica Austriaca, 21, N° 3, 237 (1966)

-1967-

## Bajas Temperaturas

- ✓ -LONGITUDINAL MAGNETOMORPHIC EFFECT IN INDIUM FILMS  
F. de la Cruz, M.E. de la Cruz & J.M. Cotignola  
Physical Review, 163, N° 3, 575 (1967)
- ✓ -THERMAL CONDUCTIVITY OF POLYCRYSTALLINE ZINC BELOW 1°K  
J.M. Cotignola, F. de la Cruz, M.E. de la Cruz & R.P. Platzek  
Review of Scientific Instruments, 38, N° 1, 87 (1967)

## Colisiones Atómicas

- ✓ -CHARGE EQUILIBRIUM OF HELIUM IONS IN HELIUM GAS FROM 60 TO 840 keV  
W. Meckbach & I.B. Nemirovsky  
The Physical Review, 153, N° 1, 113 (1967)

## Metales

- ✓ -TENSILE RESULTS IN ORDERED AND DISORDERED Ni<sub>3</sub>Fe SINGLE CRYSTALS  
M. Victoria & A.E. Vidoz  
Acta Metallurgica, 15, 676 (1967)

Teoría

-TWO-PARTICLE GREEN FUNCTIONS AND NUCLEAR STRUCTURE

W.J. Mulhall, R.J. Liotta, J.A. Evans & R.P.J. Perazzo  
Nuclear Physics A, 93, 261 (1967)

-APPLICATION OF THE GREEN FUNCTION METHOD TO THE NUCLEI  $^{90}\text{Zr}$  AND  $^{86}\text{Kr}$

W.J. Mulhall & R.J. Liotta  
Nuclear Physics A, 95, 161 (1967)

✓ -THE USE OF COHERENT STATES IN THE THEORY OF SUPERFLUIDITY

A. López  
Physics Letters A, 25, N° 2, 83 (1967)

✓ -THE DETERMINATION OF THE SIGN OF THE SPIN-HAMILTONIAN PARAMETERS

M.E. Foglio  
Nuovo Cimento, 50B, N° 1, 158 (1967)

✓ -THE ELECTROMAGNETIC ENERGY-MOMENTUM TENSOR IN A MATERIAL MEDIUM:  
A CRUCIAL THOUGHT EXPERIMENT

J. Agudín  
Physics Letters A, 24, N° 13, 761 (1967)

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Bajas Temperaturas

✓ -THERMAL AND ELECTRICAL CONDUCTIVITIES OF VERY-HIGH-PURITY INDIUM

M.E. de la Cruz, F. de la Cruz, J.M. Cotignola, O.J. Bressan  
& C.A. Luengo  
Physical Review, 176, N° 3, 871 (1968)

Metales

✓ -TENSILE BEHAVIOUR UPON ORDERING OF  $\text{Ni}_3\text{Fe}$  SINGLE CRYSTALS

M. Victoria & A.E. Vidoz  
Physica Status Solidi, 28, 131 (1968)

✓ -THE STABILITY OF ANTIPHASE BOUNDARY TUBES

G. Schoeck  
Scripta Metallurgica, 2, 283 (1968)

X

✓ -CRITICAL TEMPERATURE FOR ORDERING IN  $\beta\text{-AgZn}$  AND  $\beta\text{-AgCd}$

J.P. Abriata, A. Cabo & J. Kittl  
Scripta Metallurgica, 2, 41 (1968) ✓

X

Teoria

-EFFECT OF NORMAL PROCESSES ON THE THERMAL CONDUCTIVITY OF FINITE INSULATING SAMPLES

B. Alascio, H. Nazareno & G. Carabelli ✓

Nuovo Cimento, 55B, N° 2, 362 (1968)

-UBER DIE GRENZEN DER MECHANISCHEN UND DER ELEKTROMAGNETISCHEN BETRACHTUNGSWEISE

G. Beck

Acta Physica Austriaca, 28, 38 (1968)

-TIME DELAY OF SCATTERING PROCESSES

J.L. Agudín

Physical Review, 171, 1385 (1968)