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Directeur du LEMA (Laboratoire d'électrodynamique des matériaux avancés)
de 1996 à 2012, UMR CNRS 6157 à partir de 2002
jusqu'à sa fusion avec deux autres équipes, l'ensemble devenu GREMAN UMR 7347

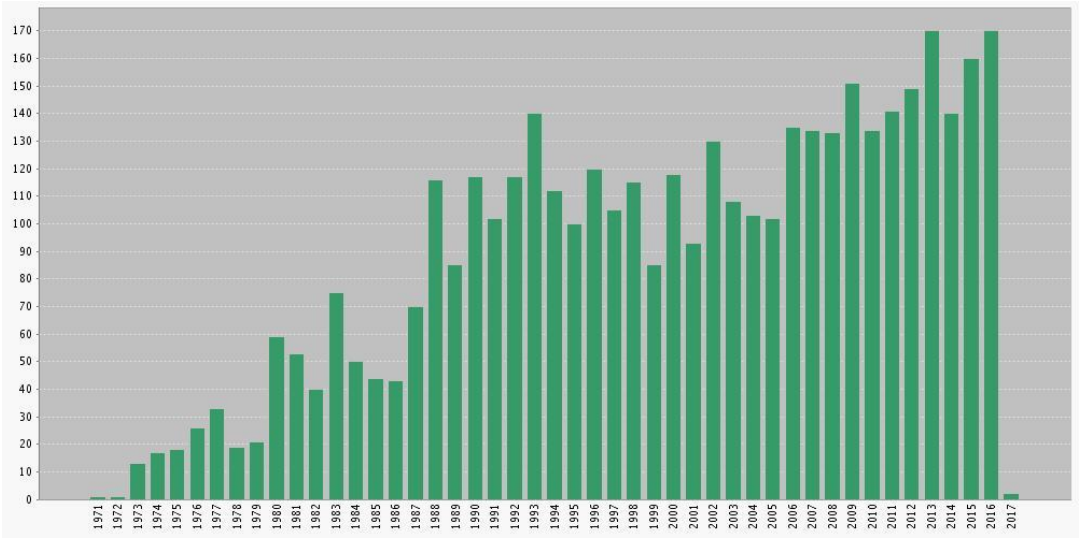
Vice-président de Centre.Sciences, CCSTI de la Région Centre

235 publications dans des revues internationales à comité de lecture
39 *actes de conferences et autres publications*
6 livres *sur la* SUPRACONDUCTIVITÉ (ED. LAVOISIER, Tec & Doc), LA PROGRAMMATION (ED. SYBEX)
L'EFFET DE SERRE ET LE DÉVELOPPEMENT DURABLE (ED. ALBIN MICHEL, SCHOLAR'S PRESS)
5 *chapitres de livres (*ED. ACADEMIC PRESS, NORTH HOLLAND*)*

+ de 4300 citations dans les revues à comité de lecture (Web of Science)

H(irsch) index : 39 (Google scholar)

80 conférences invitées
81 communications orales dans des conférences in internationales



Citations (Web of Sciences)

- **Officier dans l'Ordre des Palmes Académiques**
- **Médaille de bronze du CNRS (thermodynamique)**
- **Lauréat du Prix Yvan Peyches de l'Académie des Sciences** "pour sa contribution à la compréhension des propriétés infrarouges des oxydes modèles jusqu'aux verres industriels à haute température"

1996-2012 **Directeur-fondateur du Laboratoire d'électrodynamique des matériaux avancés**

- **UMR 6157 CNRS/CEA *en 2002***
- *FRE 2077 CNRS in 2000*
- *LRC M01 CEA in 1998*
- *EA 2099 in 1996*

2006-2011 **Directeur du Conseil Scientifique du Centre d'études et de recherches technologiques en microélectronique (CERTeM)**

2005-2011 Conseiller scientifique du Pôle de compétitivité S2E2
« Sciences & Systèmes de l'énergie électrique »

1999-2006 **Chargé de mission du Centre National de Recherches Technologiques sur la Microélectronique de puissance**

1996—1999 **Directeur du GDR 1208 CNRS « Liaison chimique dans le solide »**

1991—1997 **Chargé de mission scientifique CNRS (DR8)**

- Directeur-fondateur de MICROSCOOP

1982—1996 **Sous-directeur du Centre de Recherche sur la Physique des hautes températures, UPR 4212 CNRS, Orléans**

1981-1982 Un an à l'Institut Max-Planck de Physique des solides de Stuttgart

1998-2015 Directeur de *COVALENCES*, publication de *Centre.Sciences*

1995-2008 Associate Editor of *MATERIALS SCIENCE & ENGINEERING B*

1989—1991 Coordinateur du contrat européen ESPRIT II 3327 « Lattice Dynamics of High-T_c Single Crystal Superconductors »

2006-2009 Workpackage leader du programme européen STREP NUOTO

2010-2013 Coordinateur de **ANR/PNANO/3DCAP**

2005-2009 Coordinateur de **ANR/PNANO/NANOCOMBI**

2011-2012 Expert reviewer du rapport AR5 du GIEC

Directeur ou co-directeur de 21 thèses de doctorat de 1985 à 2015

Referee de revues internationales

American Mineralogist
Annales de Chimie
Canadian Mineralogist
Colloids and Surfaces
Crystals
Energies
European Physics Journal B
Europhysics Letters
Ferroelectrics
High Temperature-high pressure
Journal of Alloys and Compounds
Journal de Chimie Physique
Journal de Physique
Journal of applied Physics
Journal of Physical Chemistry
Journal of Physics C (GB)
Journal of Physics and Chemistry of Solids
Materials Science & Engineering
Physica status solidi
Physical Review B
Physical Review Letters
Solid State Communications
Spectrochimica Acta
Vibrational Spectroscopy

Collaboration avec entreprises ou EPIC

3D-Oxides
Aérospatiale
Alcatel
Alliance Instruments
CARRAR
CNES
Ceramaspeed
CEA
Desmarquest
EDF
ESA (European Space Agency)
Mitsubishi
Norton
ONERA
Saint-Gobain-Recherche
SEP
SRTmicrocéramique
STMicroelectronics

Organisateur ou co-organisateur de conférences internationales

LEES 2014, Amboise, 2014

Colloque Louis Néel, Tours, 2013

Colloque du GDR NEEM, Tours, 2007

Journées SOLEIL Région Centre, Orléans, depuis 2000

Matériaux 2002, Tours

JMC7, Poitiers, 2000

DYPROSO 27, Tours, 1999

Organisateur de colloques de 2 jours du GDR 1208:

Bordeaux, 2000
Piriac, 1999
Paris, 1998
Tours, 1997
Paris, 1996
Paris, 1996

Colloque su GDR « Supraconducteurs » Tours, 1997

14th European Conference on Thermophysical Properties, Lyon, 1996

7th European Meeting on Ferroelectricity, Dijon, 1991

Workshop on Dynamical Properties of superconducting Oxides, Orléans, 1991

Meeting on Ferroelectricity, Orléans, 1988

4th Conference on Thermophysical Properties, Orléans, 1971

Publications dans des revues internationales à comité de lecture

MATERIALS SCIENCE & ENGINEERING REPORTS
(IMPACT FACTOR : 19,75)

1. **F. GERVAIS**, *Optical conductivity of oxides*, 39 (2002) 29-92. **84 citations (Google scholar)**

EARTH-SCIENCE REVIEWS
(IMPACT FACTOR : 7,9)

2. **F. GERVAIS**, *Anthropogenic CO2 warming challenged by 60-year cycle*, 155 (2016) 129-135.

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3. **F. GERVAIS et B. PIRIOU**, *Temperature dependence of transverse and longitudinal optic modes in TiO_2 (rutile)* **10**, 1642-54 (1974).
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4. **F. GERVAIS et B. PIRIOU**, *Temperature dependence of transverse and longitudinal optic modes in the α and ß phases of quartz* **11**, 3944-50 (1975).
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5. **J.F. BAUMARD et F. GERVAIS**, *Plasmon and polar optical phonon in reduced rutile TiO_{2-x}* **15**, 2316-27 (1977).

6. **F. GERVAIS et J.L. SERVOIN**, *Phonon self-energy in $LiTaO_3$ and $LiNbO_3$* **15**, 4532-6 (1977).

7. **J.L. SERVOIN, F. GERVAIS, A.M. QUITTET et Y. LUSPIN**, *Infrared and Raman responses in ferroelectric perovskite crystals : apparent inconsistencies* **21**, 2038-41 (1980).

8. **J.L. SERVOIN, Y. LUSPIN et F. GERVAIS**, *Infrared dispersion in $SrTiO_3$ at high temperature* **22**, 5501-6 (1980).
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9. **F. GERVAIS**, *Temperature dependence of polar phonons, plasma excitations and effective charges below the semiconducting-metal phase transition of NbO_2* **23**, 6580-4 (1981).

10. **D. RYTZ, M.D. FONTANA, J.L. SERVOIN et F. GERVAIS**, *High-temperature infrared reflectivity study of the soft mode in $KTa_{1-x}Nb_xO_3$ for a Nb concentration x = 0.018* **28**, 6041-50 (1983).

11. **F. GERVAIS et W. KRESS**, *Lattice dynamics of incipient ferroelectric rutile* TiO_2 **28**, 2962-8 (1983).

12. **P. ECHEGUT, F. GERVAIS et N.E. MASSA**, *Pseudosymmetry and infrared activity in the incommensurate phase of A_2BX_4 compounds* **30**, 6039-44 (1984).

13. **F. GERVAIS et W. KRESS**, *Lattice dynamics of oxides with rutile structure and instabilities at the metal-semiconductor phase transitions of NbO_2 and VO_2* **31**, 4809-14 (1985).
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15. **P. SIMON et F. GERVAIS**, *Phase-transition mechanism in RbH_2PO_4-type ferroelectrics* **32**, 468-70 (1985).

16. **P. ECHEGUT, F. GERVAIS et N.E. MASSA**, *Behavior of optic phonons in the commensurate and incommensurate phases of potassium selenate* **34**, 278-91 (1986).

17. **J.M. BASSAT, P. ODIER et F. GERVAIS**, *Two-dimensional plasmon in nonstoichiometric La_2NiO_4* **35**, 7126-8 (1987).
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18. **P. SIMON, F. GERVAIS et E. COURTENS**, *Paraelectric-ferroelectric phase transitions of KH_2PO_4, RbH_2PO_4 and KH_2AsO_4 studied by infrared reflectivity* **37**, 1969-79 (1988).

19. **F. GERVAIS, P. ECHEGUT, J.M. BASSAT et P. ODIER**, *Analysis of infrared reflection spectra of oxides of the La_2CuO_4 high-T_c superconductor family in polarized light* **37**, 9364-72 (1988).
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20. **M.A. PIMENTA, P. ECHEGUT, Y. LUSPIN, G. HAURET, F. GERVAIS et P. ABELARD**, *High-temperature phase transitions in $LiKSO_4$* **39**, 3361-8 (1989).

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23. **F. GERVAIS, J.L. SERVOIN, A. BARATOFF, J.G. BEDNORZ,(1) G. BINNIG,(2)** *Temperature dependence of plasmon in Nb-doped $SrTiO_3$* **47**, 8187-94 (1993).
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30. **B. Rousseau, D. De Sousa Meneses, A. Blin, M. Chabin, and P. Echegut, P. Odier, F. Gervais**, *High-temperature behavior of infrared conductivity of a Pr_2NiO_{4+d} single crystal*, **72** (2005) 104114.

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2 **Prix Nobel de Physique**

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33. **N. H. HONG, A. RUYTER, F. GERVAIS, W. PRELLIER, J. SAKAI** *Magnetic structure of $V:TiO_2$ and $Cr:TiO_2$ thin films from magnetic force microscopy measurements,* **97** (2005) 10D323.

34. **H. Bouyanfif, J. Wolfman, M. El Marssi, Y. Yuzyuk, R. Bodeux, M. Gervais, F. Gervais** *Combinatorial $(Ba,Sr)TiO_3$ thin film growth : X-ray diffraction and Raman spectroscopy investigation,* **106** (2009) 034108.

35. **Y.K. Vayunandana Reddy, J. Wolfman, C. Autret-Lambert, M. Gervais, F. Gervais,** *Strain relaxation of epitaxial of (Ba Sr)(Zr Ti)O3 thin films grown on SrTiO3 substrates by pulse laser deposition,* **107** (2010) 106101.

36. **Guozhen Liu, Jérôme Wolfman, Cécile Autret-Lambert, Joe Sakai, Sylvain Roger, Monique Gervais, François Gervais,** *Microstructural and dielectric properties of Ba0.6Sr0.4Ti1−xZrxO3 based combinatorial thin film capacitors library*, 108 (2010) 114108.

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39. **L. PINTSCHOVIUS, J.M. BASSAT, P. ODIER, F. GERVAIS, B. HENNION et W. REICHARDT**, *Phonon anomalies in La_2NiO_4* **5**, 247-52 (1988).

40. **R. LOBO, F. GERVAIS,** *The strange infrared conductivity of superconducting $La_2CuO_{4.06}$* **37,** 341-6 (1997).

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41. **K.A. MÜLLER,[(3)] Y. LUSPIN, J.L. SERVOIN, F. GERVAIS,** *Displacive-order-disorder crossover at the ferroelectric-paraelectric phase transitions of $BaTiO_3$ and $LiTaO_3$* **43**, 537-42 (1982).

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42. **A.M. QUITTET, J.L. SERVOIN et F. GERVAIS**, *Correlation of the soft modes in the orthorhombic and the cubic phases of $KNbO_3$* **42**, 493-9 (1981).

43. **F. GERVAIS et J.L. SERVOIN**, *Role of polar phonons in the chemical bound at structural phase transitions characterized by repetitive Fourier spectroscopy* **42**, C6 415-7 (1981).

44. **Y. DANSUI, B. CALES et F. GERVAIS**, *Defect structure and physical properties of strontium titanate* **47**, C1 871-5 (1986).

45. **T. PAROT-RAJAONA, B. COTE, Y. VAILLS et F. GERVAIS**, *Degree of coherence of vibrations in silicate glasses* **2**, C2 227-30 (1992).

[3] **Prix Nobel de Physique**

JOURNAL OF CHEMICAL PHYSICS

46. **Yun Jang, Francois Gervais, Yves Lansac,** *A-Site Ordering in Colossal Magnetoresistance Manganite $La_{1-x}Sr_xMnO_3$? Molecular Dynamics Simulations and Quantum Mechanics Calculations,* 131 (2009) 094503

JOURNAL OF PHYSICS C — SOLID STATE PHYSICS puis CONDENSED MATTER

47. **F. GERVAIS et B. PIRIOU**, *Anharmonicity in several-polar-mode crystals: adjusting phonon self-energy of TO and LO modes in Al_2O_3 and TiO_2 to fit infrared reflectivity* **7**, 2374-86 (1974).
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48. **F. GERVAIS**, *Critical behavior of A_2-type modes in the vicinity of the phase transition of quartz* **7**, L415-7 (1974).

49. **F. GERVAIS et J.F. BAUMARD**, *Infrared dispersion of niobium dioxide* **12**, 1977-83 (1979).

50. **Y. LUSPIN, J.L. SERVOIN et F. GERVAIS**, *Soft mode spectroscopy in barium titanate* **13**, 3762-73 (1980).
191 citations

51. **M.D. FONTANA, G. METRAT, J.L. SERVOIN et F. GERVAIS**, *Infrared spectroscopy in $KNbO_3$ through the successive ferroelectric phase transitions* **16**, 483-514 (1984).
250 citations

52. **M.A. PIMENTA, P. ECHEGUT et F. GERVAIS**, *High-temperature phase transitions in $LiKSO_4$: an infrared spectroscopy study* **19**, 5519-27 (1986).

53. **C. RIDOU, M. ROUSSEAU et F. GERVAIS**, *The temperature dependence of the infrared reflection spectra in the fluoperovskites $RbCaF_3$, $CsCaF_3$ and $KZnF_3$* **19**, 5757-67 (1986).

54. **V. ZELEZNY, P. SIMON, F. GERVAIS et C. BARTA**, *High-temperature infrared reflectivity spectroscopy in lead chloride* **21**, 4727-36 (1988).

55. **A. BOUMRICHE, P. SIMON, M. ROUSSEAU, J.Y. GESLAND et F. GERVAIS**, *Infrared dispersion of $BaLiF_3$* **1**, 5613-20 (1989).

56. **F. BREHAT, B. WYNCKE et F. GERVAIS**, *Anisotropy of effective charge in $NaNO_2$, $NaNO_3$, KNO_3 and $CaCO_3$* **1**, 9001-8 (1989).

57. **M.L. SANTOS, A. ALMEIDA, M.R. CHAVES, A. KLÖPPERPIEPER, J. ALBERS, J.A. GOMES-MOREIRA, F. GERVAIS,** *Infrared reflectivity spectroscopy of phase transitions in betaine phosphate* ***9,*** 8119-34 (1997).

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59. **S. PESSAUD, F. GERVAIS, D. DE SOUSA, R. LOBO, C. CHAMPEAUX, P. MARCHET, A. CATHERINOT, M. LICHERON, J. L. LONGUET, F. RAVEL,** *Optical conductivity of high-T_c cuprate thin films deposited by multi-target laser ablation* **12**, 1517-25 (2000).

60. **P. THIBAUDEAU, F. GERVAIS**, *Ab initio calculation of phonon modes in $MgAl_2O_4$ spinel* 14 (2002) 3543-52.

61. **N.H. HONG, J. SAKAI, J. G. NOUDEM, A. HASSINI, F. GERVAIS, M. GERVAIS,** *Ru doped $La_{0.7}(Ba\text{-}Ca)_{0.3}MnO_3$ thin films: Indirect Evidence of Phase Separation* **15** (2003) 6527-6536.

62. **B. PIGNON, G. GRUENER, V.T. PHUOC, F. GERVAIS, C. MARIN, L. AMMOR,** *Comparative infrared study of optimally doped and underdoped La2-xSrxCuO4 single crystals,* **20** (2008) 375230.

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63. **PETIT N., F. GERVAIS, P. BUVAT, P. HOURQUEBIE, P. TOPART,** *Analysis of infrared reflectivity of conducting polymers : example of camphor-sulphonic-acid-doped polyaniline* **12**, 367-72 (1999).

64. **PETIT N., DAULAN C., SORET J.C., MAIGNAN A., GERVAIS F.,** *Temperature dependence of infrared conductivity of manganites* $Pr_{0.7}Ca_{0.3-x}Sr_xMnO_3$ (x = 0, 0.05 and 0.2) **14**, 617-25 (2000).

65. **N. PETIT, V. GARNIER, V. TA PHUOC, R. CAILLARD, A.M. FRELIN, A. RUYTER, I. LAFFEZ, J-C. SORET, A. MAIGNAN, F. GERVAIS,** *Polarized infrared reflectivity study of an oriented ceramic of* $Bi_2Sr_2Ca_2Cu_3O_{10+\delta}$ *(Bi-2223)* **25** (2002) 423-9.

66. **F. GERVAIS, N. PETIT, C. POPON, P. BUVAT**, *Doping dependence of infrared conductivity of camphor-sulphonic-acid-doped polyaniline* **31** (2003) 47-52.

67. **C. Autret-Lambert, M. Gervais, M. Zaghrioui, S. Roger, F. Gervais, N. Raimboux, and P. Simon,** *Temperature dependence of phase separation and magnetic anisotropy by electron spin resonance in* $Pr_{0.6}Ca_{0.4}Mn_{0.9}Ru_{0.1}O_3$, **47** (2005) 207.

68. **S. Krohns, J. Lu, P. Lunkenheimer, V. Brizé, C. Autret-Lambert, M. Gervais, F. Gervais, F. Bourée, F. Porcher, A. Loidl,** *Correlations of structural, magnetic, and dielectric properties of undoped and doped CaCu3Ti4O12* **72** (2009) 173-182

PHYSICA C

69. **L. PINTSCHOVIUS, J.M. BASSAT, P. ODIER, F. GERVAIS, B. HENNION et W. REICHARDT**, *Phonon anomalies in* La_2NiO_4 **153**, 276-7 (1988).

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72. **J.P. LOUP, J.M. BASSAT, G. COUTURIER F. GERVAIS et P. ODIER,** *Correlations between optical and electrical properties in La-Sr-Ni-O compounds* **185**, 1005-6 (1991).

73. **M. LICHERON et F. GERVAIS**, *Search for superconductivity in* $(Ba_{1-x}K_x)_2Pb_{1-y}Bi_yO_4$, **185**, 943-4 (1991).

74. **R.P.S.M. LOBO, C. ALLANCON, F.J. GOTOR, J.M. BASSAT, J.P. LOUP, P. ODIER, K. DEMBINSKI, F. GERVAIS, C. CHAMPEAUX, P. MARCHET, A. CATHERINOT,** *Analysis of infrared-visible-near ultraviolet reflectivity of conducting and superconducting oxides***, 235**, 1071-2 (1994).

75. **M. LICHERON, I. REYNAUD, F. GERVAIS, C. CHAMPEAUX, P. MARCHET, A. CATHERINOT, R.P.S.M. LOBO,** *Layered Ba-K-Pb-Bi-O superconductor family : characterization of laser-ablated films* **235**, 709-10 (1994).

76. **F. GERVAIS, R. LOBO,** *Crossover from London to Mattis–Bardeen behavior evidenced by fitting c-axis conductivity spectra of* $YBa_2Cu_3O_{7-\delta}$ **282,** 1141-2 (1997).

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81. **ROMAIN BODEUX, MONIQUE GERVAIS, JÉRÔME WOLFMAN, FRANÇOIS GERVAIS**, Electrical parameters of Schottky contacts in *CaCu3Ti4O12 thin film capacitors* **116**, 2001-2006 (2014)

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82. **F. GERVAIS et H. AREND**, *Long-wavelength phonons in the four phases of $\{N(CH_3)_4\}_2CuCl_4$ and effective charges* **50**, 17-22 (1983).

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85. **S. PESSAUD, D. DE SOUSA, R. LOBO, F. GERVAIS**, *Extended-Drude model to fit infrared conductivity of cuprate laser ablated films* **12,** 3323-5 (1998).

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325. Université de Würzburg (1982)
326. IBM Zürich (1982)
327. Université de Belo Horizonte (1992)
328. Université de Braga (1996)
329. Université de Louvain la Neuve (1997)
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