

Roma, 9 Settembre 2017

Curriculum Vitae di Mariangela Cestelli Guidi

Posizione attuale: Tecnologo presso i Laboratori Nazionali di Frascati dell'INFN

Mansioni:

- Responsabile della linea di luce di sincrotrone Infrarossa del laboratorio Dafne-Luce dell'INFN.
- Referente per il Trasferimento Tecnologico dei Laboratori Nazionali di Frascati dell'INFN.
- Membro del Review Panel 4 "Chemistry and soft Matter" per Synchrotron Soleil
- Membro del Review Panel H "Condensed Matter" per Elettra Sincrotrone Trieste

Ambiti di ricerca scientifica e tecnologica:

- Imaging e microspettroscopia IR con luce di sincrotrone per applicazioni in biomedicina radiobiologia
- Spettroscopia su sistemi solidi in condizioni estreme (alta pressione, basse temperature)
- Tecniche diagnostiche non distruttive per i beni culturali

Progetti Commissione V

- R.Loc. di ETHICS LNF
- R.Loc. di TMAGIC LNF
- R.Loc. di TERA LNF
- R.Loc. di THZ_RD LNF
- R.Loc. di TERA LNF (Call vincitrice 2018)

Titoli di studio:

2002-2004: Assegno di Ricerca dell'Università di Roma "La Sapienza" e dall'INFN per eseguire il *commissioning* della linea di Luce di sincrotrone infrarossa dei LNF e seguire l'attività sperimentale legata agli utenti della linea stessa

2001: Dottorato di Ricerca in Fisica, XIV Ciclo, l'Università degli studi di Parma. Argomento della tesi: "*Magnetic order and polaronic dynamics in low doping lanthanum manganites: a microscopic local probe study by μ SR and NMR-NQR*". Coordinatore della tesi: Prof. Roberto De Renzi.

1998: Laurea in Fisica, Università di Roma "La Sapienza", votazione 110/110 *cum laude*; Titolo della tesi: "*Studio dell'emissione di radiazione di sincrotrone infrarossa da discontinuità di campo magnetico*". Relatore Prof. Paolo Calvani.

1992: Diploma di Maturità classica, Liceo "E.Q. Visconti" di Roma.

Periodi di ricerca all'estero:

- 1999-2001: Rutherford Appleton Laboratories (UK),
- 1999-2001: Paul Scherrer Institute (CH)
- 1998: Laboratoire pour l'Utilisation du Rayonnement Electromagnetique (Lure) Orsay (FR)

Abilitazioni scientifiche:

Abilitazione Scientifica Nazionale (ASN2012) per Professore di II fascia nei settori concorsuali 02/B3 (Fisica Applicata) e 02/B1 (Fisica della Materia).

Attività Didattica:

2013-2016 Docenza presso Fondazione Centro per la Conservazione ed il Restauro dei Beni Culturali "La Venaria Reale"

"Scuola Di Spettroscopia Infrarossa Applicata Alla Diagnostica Dei Beni Culturali";

2003: Corso trimestrale di Laboratorio di Fisica I - Meccanica e Termodinamica
Dipartimento di Fisica, Università di Roma "La Sapienza". Titolare del corso: Prof. P. Mataloni

2004: Corso di Laboratorio di Fisica della Materia
Dipartimento di Fisica, Università di Roma "La Sapienza". Lezioni per gli studenti del IV anno.
Titolare del corso: Prof. P. Calvani

2006: Corso di Laboratorio di Fisica
Facoltà di Ingegneria, Università di Roma "La Sapienza". Lezioni per gli studenti del II anno.
Titolare del corso: Prof. A. Sciubba.

2014-2016 Masterclass INFN Inspyre: Diagnostics and preservation of Cultural Heritage

Progetti EU

TARI Hadron Physics (Integrated I3 Initiative 2004-2009)

E.Li.S.A. (Transnational Access program 2010-2012)

Calipso (Transnational Access program 2013-2015)

Calipso Plus (Transnational Access program 2017-2021)

Open Sesame (H2020-INFRA-SUPP-2016-1)

Organizzazione di scuole e Workshop

- Primo Corso Interdisciplinare di Spettromicroscopia. LNF, 15-20 maggio 2006
- Secondo Corso Interdisciplinare di Spettromicroscopia. LNF, 16-18 ottobre 2007
- "Life science microspectroscopy school" presso Sesame (Giordania) 15-19 Aprile 2018. Progetto EU OPEN SESAME.

Tesi di laurea, Dottorato e tirocini ospitati presso il laboratorio sotto la mia supervisione:

- Chiara Mirri, post-doc (contratto ex art. 23 ricercatore) su progetto EU Elisa (2008)
- Francesca Marchio, Università della Calabria. "Progetto MaTeRiA Master SPRINT PON a3_00370/F" (2013)
- Debora Schierano, Università di Firenze. Tesi di laurea (Nov 2013-oggi)
- Andrea Serra, Università di Roma Tre. Tesi di laurea (Aprile 2014)
- Gihan Kahmel, Università de Il Cairo. Post-doc (contratto ex art. 23 ricercatore) su progetto EU Calipso (Maggio 2014)
- Marco Angelucci, assegno di ricerca 1 anno (Maggio 2014)
- Maddalena Daniele, Università dell'Aquila. Tesi di Dottorato in co-tutela (Gennaio 2014)
- Elisa Fardelli, stage per laboratorio di spettroscopia FTIR Università La Sapienza (Marzo-Luglio 2017)
- Elena Missale, stage laboratorio IV anno e Tesi di Laurea (Novembre 2016-Luglio 2017)

Contributi a Conferenze

"L'innovazione tecnologica per la diagnostica dei Beni Culturali: macro-imaging IR e micro XRF" ; Dipartimento di Ingegneria, Univ. La Sapienza; 15 Marzo 2013.

"FT-IR microspectroscopy and imaging as a diagnostic tool for the investigation of biological systems" ICFDT, LNF 25-28 Nov 2013

"*Innovative photochemical facility at Dafne Luce*" (co-author) SRI 2012 (Synchrotron Radiation Instrumentation)

"*ATR-FTIR synchrotron real-time imaging of living cells: a new approach*". (oral) WIRMS 2011 (6th International Workshop on Infrared Spectroscopy and Microscopy with Accelerator-Based Sources); Trieste, September 4-8, 2011.

"*Performances of synchrotron radiation sources for biological infrared imaging: status and perspectives*" (oral); ITSIR 2011 (Imaging Techniques With Synchrotron Radiation); Bordeaux September 24-27, 2011.

"*Synchrotron environment for biological investigations*" (oral) DASIM 2007 (Diagnostic Applications in Synchrotron Infrared Microspectroscopy). Synchrotron Soleil, St. Aubin, 10-11 settembre 2007.

"*Far-Infrared Synchrotron radiation sources as new facilities for investigations of optical properties of solids in normal and extreme conditions: SINBAD achievements and perspectives*" (oral); SMEC 2005 (Study of Matter at Extreme Conditions), Miami, April 17-21 2005.

"*Far-infrared pressure driven metal-insulator transition in $La_{(1-x)}Ca_xMnO_3$ manganites*". (oral) SPIE 2005 (Strongly Correlated Electron Materials: Physics And Nanoengineering).

"*Performance of the Sinbad beamline for High Pressure Far-Infrared experiments*" (oral); High Pressure Workshop, CNR Sesto Fiorentino, 3-4 marzo 2005.

"*Sinbad, the IRSR beamline at DAFNE*" (oral) ; WIRMS 2003 (Workshop on Infrared Spectroscopy and Microscopy with accelerator Based Sources, Lake Tahoe, CA 8-11 Luglio 2003):

"*First experiment at Sinbad, the Infrared beamline at Dafne*". (poster); BASIE meeting (Biological Applications of Synchrotron Infrared in Europe) Karlsruhe, 11-12 Sept 2003.

Pubblicazioni

1. Strong nonlinear terahertz response induced by Dirac surface states in Bi₂Se₃ topological insulator; F. Giorgianni et al.; *Nature Communications* 7, Article number: 11421 doi:10.1038/ncomms11421
2. HT-FTIR micro-spectroscopy of cordierite: the CO₂ absorbance from in situ and quench experiments. Francesco Radica, Giancarlo Della Ventura, Fabio Bellatreccia, Mariangela Cestelli Guidi; *Physics and Chemistry of Minerals* 43, 69-81 (2016)
3. The Diffusion Kinetics Of Co₂ In Cordierite: An Ht-Ftir Microspectroscopy Study; Francesco Radica, Giancarlo Della Ventura, Fabio Bellatreccia, Gianfelice Cinque, Augusto Marcelli, Mariangela Cestelli Guidi; *Contributions to Mineralogy and Petrology* (2016); DOI: 10.1007/s00410-016-1228-x
4. Physical vapor deposition synthesis of amorphous silicate layers and nanostructures as cosmic dust analogs; A. De Sio, L. Tozzetti, Ziyu Wu, A. Marcelli, M. Cestelli Guidi, G. Della Ventura, Haifeng Zhao, Zhiyun Pan, Wenjie Li, Yong Guan. A. De Sio, L. Tozzetti, Ziyu Wu, A. Marcelli, M. Cestelli Guidi, G. Della Ventura, Haifeng Zhao, Zhiyun Pan, Wenjie Li, Yong Guan and E. Pace; *A&A*, 589 (2016) A4; DOI: <http://dx.doi.org/10.1051/0004-6361/201527222>
5. Methodology for FTIR Imaging of Individual Cells; Seydou Yao, M. Cestelli Guidi, M. Delugin, G. Della-Ventura, A. Marcelli and C. Petibois; *Acta Physica Polonica Series a* 129(2):250-254 · February 2016; DOI: 10.12693/APhysPolA.129.250
6. Optical and Vibrational Spectra of CsCl-Enriched GeS₂-Ga₂S₃ Glasses; Halyna Klym, Ivan Karbovnyk, Mariangela Cestelli Guidi, Oleksandra Hotra and Anatoli I. Popov; *Nanoscale Research Letters* 11(1):132 · March 2016; DOI: 10.1186/s11671-016-1350-8
7. Multivariate Analysis Applied to Raman Mapping of Dye-Functionalized Carbon Nanotubes: a Novel Approach to Support the Rational Design of Functional Nanostructures; Sonja Visentin, Nadia Barbero, Francesca Bertani, Mariangela Cestelli Guidi, Giuseppe Ermondi, Guido Viscardi and Valentina Mussi; *Analyst* 150 (2015) 5754-5763; DOI: 10.1039/C5AN00820D
8. Graphitic Patterns on CVD Diamond Plate as Microheating/Thermometer Devices; Daniele Di Gioacchino, Augusto Marcelli, Alessandro Puri, Antonio De Sio, Mariangela Cestelli Guidi, Yimamu Kamili, Giancarlo Della Ventura, Andrea Notargiacomo, Paolo Postorino, Sara Mangialardo, Eckhard Wörner, Emanuele Pace; *ACS Applied Materials & Interfaces* (IF: 5.9) 7 (2015) 10896-10904
9. Second-order susceptibility spectra for δ-BiB₃O₆ polymer nanocomposites deposited on the chalcogenide crystals; I V Kityk, M Chrunik, A Majchrowski, Mariangela Cestelli Guidi, Marco Angelucci, Gihan Kamel, A.O. Fedorchuk, M Pępczyńska, L R Jaroszewicz, O Parasyuk, I M Bolesta, R Kowerdziej; *Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy* 146 (2015) 187-191
10. FTIR studies of silicon carbide 1D- nanostructures; I. Karbovnyk, P. Savchyn, A Huczko, M Cestelli Guidi, C Mirri, A I Popov; *Materials Science Forum* 821-823 (2015) 261-264 - http://www1.cfi.lu.lv/teor/publications/2015/2015_25.pdf

11. Speciation and diffusion profiles of H₂O in water-poor beryl: comparison with cordierite; G. Della Ventura, F. Radica, F. Bellatreccia, C. Freda, M. Cestelli Guidi; *Physics and Chemistry of Minerals* 146 (2015) 187-191
12. FTIR imaging in diffusion studies: CO₂ and H₂O in a synthetic sector-zoned beryl; Giancarlo Della Ventura, Francesco Radica, Fabio Bellatreccia, Andrea Cavallo, Gianfelice Cinque, Luca Tortora and Harald Behrens; *Front. Earth Sci.*, 23 June 2015 - <http://dx.doi.org/10.3389/feart.2015.00033>
13. Atmosphere in a test tube; R. Claudi, E. Pace, A. Ciaravella, G. Micela, G. Piccioni, D. Billi, M. Cestelli Guidi, L. Cocola, S. Erculiani, M. Fedel, G. Galletta, E. Giro, N. La Rocca, T. Morosinotto, L. Poletto, D. Schierano; S. Stefani; *The Astrobiology Science Conference 2015 (AbSciCon2015)*, Chicago, Illinois <http://www.hou.usra.edu/meetings/abscicon2015/pdf/7750.pdf>
14. Bunch-by-bunch profile diagnostics in storage rings by infrared array detection; A Drago, A Bocci, M Cestelli Guidi, A De Sio, E Pace and A Marcelli; *Meas. Sci. Technol.* 26 (2015) 094003
15. The identification of cystic fibrosis (CF) cells and their pharmacological correction by mid-infrared microspectroscopy and unsupervised data analysis methods Giuseppe Bellisola, Sara Caldrea, Gianfelice Cinque, Mariangela Cestelli Guidi, Baroukh Maurice Assael, Paola Melotti, Claudio Sorio. *ScienceJet* 2014, 3: 51
16. FT-IR imaging spectroscopy as a complementary analytical technique to monitor lipids as biomarkers to high-LET (linear energy transfer) radiation; Mariangela Cestelli Guidi, Chiara Mirri, Emiliano Fratini, Valerio Licursi, Augusto Marcelli; *Rend. Fis. Acc. Lincei* (2014) 25, Suppl 1; DOI 10.1007/s12210-013-0273-x
17. A proposed integrated systems approach to the radiation biology of cosmic interest: biophysics and molecular characterization of tissues irradiated with 14 MeV neutrons; Valerio Licursi, Emiliano Fratini, Barbara Benassi, Mariangela Cestelli Guidi, Claudia Consales, Augusto Marcelli, Chiara Mirri, Rodolfo Negri, Roberto Amendola; *Rend. Fis. Acc. Lincei* (2014) 25, Suppl 1: S23–S27; DOI 10.1007/s12210-013-0272-y
18. Infrared spectral investigations of UV irradiated nucleobases adsorbed on mineral surfaces; Teresa Fornaro, John Robert Brucato, Emanuele Pace, Mariangela Cestelli Guidi, Sergio Branciamore, Amaranta Pucci; *Icarus*, Volume 226, Issue 1, September–October 2013, Pages 1068–1085
19. North-American microtektites are more oxidized than tektites; Gabriele Giuli, Maria Rita Cicconi, Sigrid Griet Eeckhout, Christian Koeberl, Billy P. Glass, Giovanni Pratesi, Mariangela Cestelli-Guidi and Eleonora Paris; *American Mineralogist*, v. 98 no. 11-12 p. 1930-1937 doi:10.2138/am.2013.4505
20. FTIR and Raman spectroscopy of sideronatrite, a sodium-iron hydrous sulfate; Giancarlo Della Ventura, Gennaro Ventruti, Fabio Bellatreccia, Ivano Bilotti, Fernando Scordari, Mariangela Cestelli Guidi; *Mineralogical Magazine*, June 2013, v. 77, p. 499-507
21. Vibrational properties of LaPO₄ nanoparticles in mid- and far-infrared domain; P. Savchyn, I. Karbovnyk, V. Vistovskyi, A. Voloshinovskii, V. Pankratov, M. Cestelli Guidi, C. Mirri, O. Myahkota, A. Riabtseva, N. Mitina, A. Zaichenko, and A. I. Popov; *JOURNAL OF APPLIED PHYSICS* 112, 124309 (2012)

22. In vivo skin leptin modulation after 14 MeV neutron irradiation: a molecular and FT-IR spectroscopic study; M. Cestelli Guidi, C. Mirri, E. Fratini, V. Licursi, R. Negri, A. Marcelli & R. Amendola. *Anal Bioanal Chem*; 2012 Sep;404(5):1317-26. doi: 10.1007/s00216-012-6018-3
23. A survey of the Italian research in solid state physics by infrared spectroscopy with electron-beam sources; S. Lupi, A. Nucara, A. Perucchi, M. Cestelli Guidi, E. Chiadroni, M. Ferrario, M. Ortolani, L. Baldassarre, D. Nicoletti, C. Mirri, F. M. Vitucci, P. Di Pietro, U. Schade and P. Calvani. *Journal of Physics: Conference Series* 359 (2012) 012001; doi:10.1088/1742-6596/359/1/012001
24. The Degradation Process of Lead Chromate in paintings by Vincent van Gogh studied by means of Spectromicroscopic methods; L. Monico, K.H. Janssens, C. Miliani, G. Van der Snickt, B. G. Brunetti, M. Cestelli Guidi, M. Radepont, and M. Cotte. *Anal. Chem.*, DOI: 10.1021/ac3021592 Publication Date (Web): October 10, 2012
25. Experimental ATR device for real-time FTIR imaging of living cells using brilliant synchrotron radiation sources; Mariangela Cestelli Guidi, Seydou Yao, Diego Sali, Castano Sabine, Augusto Marcelli and Cyril Petibois; *Biotechnol Adv* (2012), doi:10.1016/j.biotechadv.2011.11.009
26. Experimental and ab initio study of vibrational modes of stressed alumina films formed by oxidation of aluminium alloys under different atmospheres. W.W. Peng, P. Roy, L. Favaro, E. Amzallag, J.B. Brubach, A. Congeduti, M. Cestelli Guidi, A.M. Huntz, J. Barros and R. Tétot. *Acta Materialia* Vol. 59, 7 (2011), 2723-2730.
27. A crystallinity study of dental tissues and tartar by infrared spectroscopy; J. A. Abraham, H. J. Sánchez, C. A. Marcelli, M. Grenón, M. Cestelli Guidi, M. Piccinini. *Anal Bioanal Chem* (2011) 399:1699–1704.
28. Functional histology of glioma vasculature by FTIR imaging; Razia Noreen, Raphael Pineau, Chia-Chi Chien, Mariangela Cestelli-Guidi, Yeukuang Hwu, Augusto Marcelli, Michel Moenner & Cyril Petibois; *Anal Bioanal Chem* (2011) 401:795–801
29. Control of Structural, Electronic and Optical Properties of Eumelanin Films by Electrospray deposition M. Abbas, M. Ali, S. K. Shah, F. D'Amico, P. Postorino, S. Mangialardo, M. Cestelli Guidi, A. Cricenti, and R. Gunnella; *The Journal of Physical Chemistry; J. Phys. Chem. B*, 2011, 115 (38), pp 11199–11207
30. Ion distribution preferences in ternary crystals $Zn_xCd_{1-x}Te$, $Zn_{1-x}Hg_xTe$ and $Cd_{1-x}Hg_xTe$; B.V. Robouch, I.V. Kutcherenko, M. Cestelli Guidi, A. Kisiel, A. Marcelli, P. Robouch, M. Piccinini, A. Nucara, R. Triboulet, E. Burattini, J. Cebulski, E.M. Sheregii, and J. Polit; *Eur. Phys. J. B* (2011) DOI: 10.1140/epjb/e2011-20575-1
31. D. Di Gioacchino, A. Marcelli, M. Cestelli Guidi, M. Piccinini, A. Puri, P. Postorino, E. Pace, A. De Sio, L. Gambicorti. "Status of PRESS-MAG-O: The experimental apparatus to probe materials and phenomena under extreme conditions at Frascati". *Journal of Physics and Chemistry of Solids* **71** (2010) 1042–1045

32. G. Della Ventura, F. Bellatreccia, A. Marcelli, M. Cestelli Guidi, M. Piccinini, A. Cavallo, M. Piochi. "Application of micro-FTIR imaging in the Earth sciences". *Anal Bioanal Chem* (2010) **397**:2039–2049
33. C. Petibois, M. Cestelli-Guidi, M. Piccinini, M. Moenner, A. Marcelli. "Synchrotron radiation FTIR imaging in minutes: a first step towards real-time cell imaging" *Anal Bioanal Chem* (2010) **397**:2123–2129
34. Cyril Petibois, Massimo Piccinini, Mariangela Cestelli Guidi and Augusto Marcelli. "Facing the challenge of biosample imaging by FTIR with a synchrotron radiation source". *J Synchrotron Radiat.* (2010) **17**:1-11
35. A. Nucara, P. Maselli, P. Calvani R. Sopracase, M. Ortolani, G. Gruener, M. Cestelli Guidi, U. Schade and J. García. "Sub-Terahertz Excitations in Manganites with Commensurate Charge Order" *J Supercond Nov Magn* **22**: 13-16 (2009)
36. M. Baldini, D. Di Castro, M. Cestelli-Guidi, J. Garcia, and P. Postorino, "Phase-separated states in high-pressure $\text{LaMn}_{1-x}\text{Ga}_x\text{O}_3$ manganites", *PRB* **80**, 1 (2009)
37. C. Petibois, G. Délérís, M. Piccinini, M. Cestelli Guidi and A. Marcelli "A bright future for synchrotron imaging" *Nature Photonics* **3**, April 2009.
38. A. Voloshyovskii, P. Savchyn, I. Karbovnyk, S. Myagkota, M. Cestelli Guidi, M. Piccinini, A.I. Popov, "CsPbCl₃ nanocrystals dispersed in the $\text{Rb}_{0.8}\text{Cs}_{0.2}\text{Cl}$ matrix studied by far-infrared spectroscopy" *Solid State Communications* **149**, 593 (2009)
39. A. Nucara, P. Maselli, P. Calvani, R. Sopracase, M. Ortolani, G. Gruener, M. Cestelli Guidi, U. Schade, and J. García. Observation of Charge-Density-Wave Excitations in Manganites; *Phys. Rev. Lett.* **101**, 066407 (2008)
40. A. Nucara, P. Maselli, M. Del Bufalo, M. Cestelli Guidi, J. Garcia, P. Orgiani, L. Maritato, and P. Calvani; Effect of Ga substitution on the optical properties of La-Sr manganites; *Phys. Rev. B* **77**, 064431 (2008)
41. Cyril Petibois & Mariangela Cestelli Guidi. Bioimaging of cells and tissues using accelerator-based sources; *Anal Bioanal Chem* (2008) **391**:1599–1608
42. B V Robouch, P Zajdel, A. Kisiel, A Marcelli, E M Sheregii, M Cestelli Guidi, M Piccinini. Analysis of the phonon line profile of hydrogenated CdTe; *J. Phys.: Condens. Matter* **20** (2008) 325217
43. D. Marrocchelli, P. Postorino, D. Di Castro, E. Arcangeletti, P. Dore, M. Cestelli Guidi, Sugata Ray, and D.D. Sarma; "Pressure and temperature dependence of the Fano resonance in the Raman spectrum of A_2FeMoO_6 systems. *Phys. Rev. B* **76**, 172405 (2007)
44. V. Kucherenko, V. S. Vinogradov, G. Karczewski, N. N. Novikova, M. Cestelli Guidi and M. Piccinini; "Manifestation of CdTe Quantum Dots and Interdiffusion in IR Reflection Spectra of CdTe/ZnTe structures with Quantum Dots" ; *Physics of the Solid State*, 2007, Vol. **49**, No. 8, pp. 1563–1566
45. C. Paluszkiwicz, W.M. Kwiatek, A. Banas, A. Kisiel, A. Marcelli, M. Piccinini; "SR-FTIR Spectroscopic preliminary findings of non-cancerous, cancerous and hyperplastic human prostate tissues"; *Vibrational Spectroscopy* **43**, 237-242 (2007)

46. A. Sacchetti, M. Cestelli Guidi, E. Arcangeletti, A. Nucara, P. Calvani, M. Piccinini, A. Marcelli, P. Postorino; "Far-infrared absorption of $\text{La}_{1-x}\text{Ca}_x\text{MnO}_{3-y}$ at high pressure". *Physical Review Letters* **96**, 035503 (2006)
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48. P. Innocenzi, T. Kidchob, J. Mio Bertolo, M. Piccinini, M. Cestelli Guidi, A. Marcelli; "Time-resolved infrared spectroscopy as an in situ tool to study the kinetics during self-assembly of mesostructured films". *Journal of Physical Chemistry B* **110**, 10837-10841 (2006)
49. J. Polit, E.M. Sheregii, J. Cebulski, A. Kisiel, M. Piccinini, A. Marcelli, B.V. Robouch, M. Cestelli Guidi, A. Nucara, A. Mycielski; "High resolution spectra of defects in CdTe obtained in far-infrared region using synchrotron radiation". *Infrared Physics and Technology* **49**, 23-28 (2006)
50. E.M. Sheregii, J. Polit, J. Cebulski, P. Sliz, A. Kisiel, M. Piccinini, A. Marcelli, B.V. Robouch, M. Cestelli Guidi, P. Calvani, V.I. Ivanov-Omskii; "First interpretation of phonon spectra of quaternary solid solutions using fine structure far-IR reflectivity by synchrotron radiation". *Infrared Physics and Technology* **49**, 13-18 (2006)
51. J. Cebulski, E.M. Sheregii, J. Polit, B.V. Robouch, A. Marcelli, M. Cestelli Guidi, M. Piccinini, A. Kisiel, A. Mycielski; "Anisotropy of oriented mono-crystalline ZnCdTe phonon spectra obtained by synchrotron radiation". *Infrared Physics and Technology* **49**, 19-22 (2006)
52. Balasubramanian, S. Bellucci, G. Cinque, A. Marcelli, M. Cestelli Guidi, M. Piccinini, A. Popov, A. Soldatov, P. Onorato; "Characterization of aluminium nitride nanostructures by XANES and FTIR spectroscopies with synchrotron radiation". *Journal of Physics: Condensed Matter* **18**, S2095-S2104 (2006)
53. J. Polit, E.M. Sheregii, B.V. Robouch, A. Marcelli, J. Cebulski, M. Cestelli Guidi, M. Piccinini, A. Kisiel, P. Zajdel, E. Burattini, A. Mycielski; "Phonon and Vibrational spectra of hydrogenated CdTe". *Journal of Applied Physics* **100**, 013521 (2006)
54. B.V. Robouch, A. Kisiel, A. Marcelli, M. Cestelli Guidi, M. Piccinini, E. Burattini, A. Mycielski; "Statistical model of sphalerite structured quaternary $\text{A}_{1-x}\text{B}_x\text{Y}_y\text{Z}_{1-y}$ systems"; *Journal of Alloys and Compounds* **426**, 31-42 (2006).
55. P. Zajdel, A. royl, J. Polit, B.V. Robouch, E.M. Sheregii, J. Warczewski, J. Cebulski, E. Burattini, A. Marcelli, M. Cestelli Guidi, M. Piccinini, A. Mycielski; "Model considerations on hydrogen distribution in hydrogenated CdTe". *Journal of Alloys and Compounds* **426**, 12-21 (2006)
56. M. Cestelli Guidi, M. Piccinini, A. Marcelli, A. Nucara, P. Calvani and E. Burattini; "Optical performances of SINBAD, the Synchrotron INfrared Beamline At DAFNE". *Journal of the Optical Society of America A* **22**, 2810-2817 (2005)
57. P. Innocenzi, L. Malfatti, T. Kidchob, P. Falcaro, M. Cestelli Guidi, M. Piccinini and A. Marcelli; "Kinetics of polycondensation reactions during self-assembly of mesostructured films studied by in situ synchrotron infrared spectroscopy". *Chemical Communications* **18**, 2384-2386 (2005)
58. P. Falcaro, S. Costacurta, G. Mattei, H. Amenitsch, A. Marcelli, M. Cestelli Guidi, M. Piccinini, A. Nucara, L. Malfatti, T. Kidchob, P. Innocenzi; "Highly ordered "defect-free" self-assembled hybrid

- films with a tetragonal mesostructure". *Journal of the American Chemical Society* **127**, 3838-3846 (2005)
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