



GNSR 2003

XVIII Congress of the National Group of Discussion on
Raman Spectroscopy and non Linear Effects

Edited by

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Preface

One of the usual appointments of that part of the scientific community that works in optical spectroscopy is the meeting organized every two years by the National Group of discussion on Raman Spectroscopy and non-linear effects (GNSR). This conference has always been an occasion of comparison between scientists from different research areas, but all using optical spectroscopy in their studies, with particular attention to Raman technique in its stationary and non linear experiments. Nano- and bio- materials, but also artistic and pharmaceutical subjects and even dynamical processes and structural properties: a wide range of topics can be afforded using this spectroscopic approach, contributing to divulge these experimental methods and themes; from this point of view, this conference is an important reference point in the Italian scientific panorama.

Due to the recent, large diffusion of the Raman spectroscopy, also as a diagnostic tool in many analytical and research laboratories, a very large number of students, doctorates and researchers is involved with the use of this technique and its wide utilization in so different fields is encouraging its use some more. So, in order to illustrate the fundamentals and the new perspectives of this spectroscopy also to young researchers without a chemical physics background, the scientific committee of GNSR and all the participants to the 2001 National Congress in Reggio Calabria, proposed a national school on Raman technique, to be organized immediately before the Conference of 2003.

The Molecular Spectroscopy group of the Chemistry Department of the University of Perugia has coordinated the two events in September 2003, in a sort of 'Raman week': the Scuola Nazionale GNSR, titled 'La tecnica Raman: fondamenti fisici, applicazioni multisettoriali e ricerca di frontiera' (The Raman technique: physical fundamentals, multidisciplinary applications and advanced research), in 15-17 September 2003, and the XVIII National Congress GNSR in the immediately following 17-19 September 2003, both of them in Perugia.

The participation to the school and to the Conference has been qualified and numerous; the enthusiasm and the requests of the participants have induced us to publish the proceeding of the meeting, as it has been done with the previous edition of the GNSR conference (Reggio Calabria, 2001), together with the text of some lessons of the Raman school.

As a consequence, the contributions of the present volume space in the main fields of the actual applications of Raman techniques, giving a picture of the state of the art of this particular optical spectroscopy and suggesting possible future developments.

In the volume the proposed papers have been presented grouped following the main questions afforded both in the conference than during the school: structure and dynamics, nano- and bio- materials, cultural heritage.

The Scientific Committee and the Organizing Committee decided and announced in the Closing Session that the GNSR 2005 Meeting will take place in Cosenza, Italy.

We want to thank you first of all each of the participants, for the contribution to the success of both events.

We are grateful also to the supports given by the sponsoring institutions and groups: the University of Perugia, Coherent Italia, Jobin Yvon S.r.l. and Gambetti Kenologia.



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Contents

Preface	<i>i</i>
Conference organization	<i>iii</i>
Raman and INS investigations on disaccharide/H ₂ O mixtures, <i>C. Branca, S. Magazù, G. Maisano, S. M. Bennington, J. Taylor</i>	1
Spectroscopic study of OH vibrations in self-associated liquids, <i>M. Paolantoni, P. Sassi, A. Morresi, R.S. Cataliotti</i>	9
H-bonding and depolarized Rayleigh scattering spectra: comparison between 1-octanol and n-octane liquid systems, <i>M. Paolantoni, P. Sassi, F. Palombo, A. Morresi, G. Paliani, R. S. Cataliotti</i>	18
Different role of confining matrices on the vibrational dynamics of water, <i>V. Venuti, V. Crupi, D. Majolino, P. Migliardo</i>	27
Water perturbation induced by two small organic solutes: an Infrared spectroscopy study, <i>M. Freda, A. Di Michele, G. Onori, A. Cantucci</i>	38
Raman spectroscopy of D _{2H} symmetry polycyclic aromatic hydrocarbons: theory and experiment, <i>E. Di Donato, M. Tommasini, C. Castiglioni, F. Negri, G. Zerbi</i>	44
Enhancement of third order non linear optical response via SERS techniques in organic materials, <i>A. Lucotti, M. Del Zoppo, G. Zerbi</i>	53
Raman spectroscopy for thin and ultrathin films <i>G. Compagnini</i>	59
SERS of 1,2,3-triazole adsorbed on silver and gold colloids, <i>B. Pergolese, M. Muniz-Miranda, A. Bigotto</i>	72

Raman study on the biodegradation of a composite periodontal membrane <i>M. Reggiani, P. Taddei, A. Tinti, C. Fagnano</i>	80
Silicon-related luminescent centre in CVD diamond films <i>M G. Donato, G. Faggio, G. Messina, S. Santangelo, G. Pucella, G. Verona Rinati</i>	86
Nitrogen incorporation in CVD diamond films <i>M. G. Donato, G. Faggio, G. Messina, E. Pace, S. Santangelo, H. Sternschulte, G. Verona Rinati</i>	98
2.41 eV Raman analysis for the non-destructive estimation of C-content in disordered CN based materials <i>G. Fanchini, G. Messina, S. Santangelo, A. Tagliaferro</i>	108
A scaling law for the growth parameters derived from Raman analysis <i>G. Messina, S. Santangelo</i>	114
Raman investigation of strain behaviour in ablated a-C films <i>G. Messina, S. Santangelo, V. De Renzi, A. Perrone</i>	121
Raman and Infrared study of PLD deposited SiO _x thin films <i>E. Fazio, F. Barreca, E. Barletta, F. Neri, S. Trusso</i>	128
Gold nanoclusters in gold-based catalytic beds: size determination and polarization effects by low-frequency Raman scattering <i>M. Ombelli, R. S. Cataliotti, G. Compagnini, A. Morresi, P. Sassi</i>	134
Low frequency Raman scattering from the acoustic vibrations of nanoparticles <i>M. Montagna</i>	149

Raman microprobe analysis of carbon nanotubes synthesized by arc method using metallic and oxide catalysts	167
<i>T. Barone, M. Castriota, E. Cazzanelli, G. Das, G. Mariotto, L. M. Montoro, J.M. Rosolen</i>	
Comparative micro-Raman study on vanadium pentoxide samples obtained via sol-gel routes: pure, confined in a porous membrane and mixed with titania	177
<i>M. Castriota, E. Cazzanelli, L. Palermo, R. Ceccato, D. Teeters</i>	
Spectroscopic characterization of thermally treated Si-rich oxynitride films deposited by PECVD on silicon substrate	187
<i>G. Das, N. Daldosso, G. Mariotto, L. Pavesi</i>	
π -electron confinement and delocalization in the Raman spectroscopy of carbon nanostructured materials	197
<i>M. Tommasini, E. Di Donato, A. Fontana, C. Castiglioni, G. Zerbi, F. Negri, K. Müllen</i>	
Characterization of materials of artistic, historical and archaeological interest	205
<i>A. Morresi</i>	
New Raman spectroscopic techniques for Cultural Heritage	217
<i>E. M. Castellucci, C. Lofrumento, M. G. Migliorini, A. Zoppi</i>	
Micro-Raman analysis on ancient french <i>SIGILLATA</i> wares	230
<i>C. Lofrumento, A. Zoppi, E. M. Castellucci</i>	
Investigations on the decorative technique and conservative state of a majolica altar manufactured by Andrea della Robbia	236
<i>M. Ombelli, C. Miliani, A. Morresi, K. Sakellariou</i>	
Structural analysis of paintings from Palazzo Maggi by means of μ -Raman and X-ray microdiffraction	250
<i>P. Colombi, E. Bontempi, I. Alessandri, S. Valetti, A. Massardi, V. Volta, L. E. Depero</i>	

Raman and FT-IR microscopy applied to the identification of pigments on ancient miniatures	256
<i>D. Barilaro, C. Branca, S. Galli, F. Magistro, D. Majolino, R. Ponterio, M. T. Rodriquez</i>	
Coherent and incoherent Raman techniques	262
<i>P. Foggi</i>	
Chemical and thermal behaviour of sp-coordinated carbon chains	269
<i>C. S. Casari, F. Siviero, A. Li Bassi, L. Ravagnan, C. Lenardi, E. Barborini, P. Miseri, P. Dilani, C. E. Bottani</i>	
Author index	275