

Prof CARLA ANDREANI

Elenco delle Pubblicazioni

1. PUBBLICAZIONI SU RIVISTE INTERNAZIONALI CON REFEREES
(Selezione)
2. LIBRI
3. COMUNICAZIONI SU INVITO A CONVEGNI E SCUOLE (Selezione)
4. LIBRI DI CONFERENZE E PROCEEDINGS (Selezione)
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31 Gennaio 2021

Ai sensi del DPR n. 445/2000 e consapevole che le dichiarazioni mendaci sono punite ai sensi del codice penale e delle leggi speciali in materia, la sottoscritta Carla Andreani dichiara che quanto di seguito riportato corrisponde a verità.

1. PUBBLICAZIONI SU RIVISTE INTERNAZIONALI CON REFEREES

LISTA DELLE PUBBLICAZIONI

217. *Alessandro Cianchi, **Carla Andreani**, Paolo Camarri, Laura Fazi, Claudio Fornaro, Enrico Preziosi, Anna Prioriello, Rinaldo Santonico, Valerio Scacco, Claudia Scatigno, Roberto Senesi and Piergiorgio Picozza*
"Evaluation of the imaging performance of the TECNOMUSE muon tomograph and its feasibility in a real scenario"
Submitted to European Physical Journal, January (2021)
216. *Giovanni Romanelli, Dalila Onorati, Pierfrancesco Ulpiani, Stephanie Cancelli, Enrico Perelli-Cippo, Jose Ignacio Marquez D'áman, Silvia Capelli, Gabriele Croci, Andrea Muraro, Marco Tardocchi, Giuseppe Gorini, **Carla Andreani** and Roberto Senesi*
"Thermal neutron cross sections of amino acids from average contributions of functional groups"
Submitted to "PHYSICAL REVIEW B" January (2021)
215. *P. Ulpiani, G. Romanelli, D. Onorati, M. Krzystyniak, **C. Andreani** and R. Senesi*
"Kurtosis of momentum and displacement distributions in biphenyl"
Submitted to Il Nuovo Cimento January (2021)
214. *Marco Martellucci, Giovanni Romanelli, Silvio Valeri, Danilo Cottone, **Carla Andreani**, and Roberto Senesi*
"The neutron cross section of barite-enriched concrete for radioprotection shielding in the range 1 meV – 1 keV"
Submitted to European Physical Journal, January (2021)
213. *P. Ulpiani, G. Romanelli, D. Onorati, M. Krzystyniak, **C. Andreani** and R. Senesi*
"The effective isotropy of the hydrogen local dynamics in biphenyl and other hydrocarbons"

J. Chem. Phys. November **153**, 234306 (2020)

212. **C. Andreani**, G. Romanelli, Alexandra Parmentier, R. Senesi, Alexander I. Kolesnikov, Hsin-Yu Ko and Roberto Car

"Hydrogen Dynamics in Supercritical Water Probed by Neutron Scattering and Computer Simulation"

Journal of Physical Chemistry Letters July **11**, 9461–9467, (2020)

211. Alessio Bocedi, Giovanni Romanelli, **Carla Andreani**, and Roberto Senesi

"Hydrogen nuclear mean kinetic energy in water down the Mariana Trench: Competition of pressure and salinity"

J. Chem. Physics **153**, 134306 (2020), doi: 10.1063/5.0021926

210. Claudia Scatigno, Giovanni Romanelli, Enrico Preziosi, Matteo Zanetti, Stewar Parker, Svemir Rudic, **Carla Andreani** and Roberto Senesi

"A python algorithm to analyse inelastic neutron scattering spectra based on the γ -scale formalism"

Submitted for publication on *Journal of Chemical Theory and Computation* September (2020)

209. C Scatigno, R Senesi, G Festa and **C Andreani**

"Chemometrics tools for Advanced Spectroscopic Analyses"

Journal of Physics: Conference Series **1548**, 012030 (2020) IOP Publishing, doi:10.1088/1742-6596/1548/1/012030

208. Dalila Onorati, Giovanni Romanelli, Pierfrancesco Ulpiani, Carlo Cazzaniga, Enrico Preziosi, Laura Arcidiacono, Giulia Festa, **Carla Andreani**, Roberto Senesi, Maria Cristina Morone

"FLUKA simulations and benchmark measurements of the YAP(Ce) scintillators installed on the VESUVIO spectrometer"

Nuclear Inst. and Methods in Physics Research, A **969**, 604012 (2020)

207. K.H. Andersen ... **C. Andreani** et al.

"The Instrument Suite of the European Spallation Source"

Nuclear Inst. and Methods in Physics Research, A, 163402 (2020)

206. *G. Festa, G. Romanelli, R. Senesi, L. Arcidiacono, C. Scatigno, S.F. Parker, M.P.M. Marques, C. Andreani*
 "Neutrons for Cultural Heritage –Techniques, Sensors, and Detection"
Sensors, **20**, 502 (2020), doi:10.3390/s20020502
205. *L. Arcidiacono, M. Martín-Torres, R. Senesi, A. Scherillo, C. Andreani, G. Festa*
 "Cu-based alloys as a benchmark for T-PGAA quantitative analysis at spallation neutron sources"
Journal of Analytical Atomic Spectrometry - JAAS- **35**, 331 (2020)
 doi:10.1039/C9JA00268E
204. *Giulia Festa, Sara Luise Lämmlein, Roberto Senesi, Jason Price, Carlo Chiesa, Claudia Scatigno, N. Sadler, David Mannes, Laura Arcidiacono Robert A. Robinson, and C. Andreani*
 "Effect of coating systems as a barrier to humidity for lutherie woods studied by neutron radiography "
Journal of Cultural Heritage online 9 December (2020)
<https://doi.org/10.1016/j.culher.2019.11.004>
203. *Giulia Festa, Francesco Mallamace, Giulia Maria Sancesario, Carmelo Corsaro, Domenico Mallamace, Enza Fazio, Laura Arcidiacono, Victoria Garcia Sakai, Roberto Senesi, Enrico Preziosi, Giuseppe Sancesario, Carla Andreani*
 "Aggregation States of A β 1–40, A β 1–42 and A β p3–42 Amyloid Beta Peptides: A SANS Study"
International Journal of Molecular Science **20**, 4126 (2019)
 doi:10.3390/ijms20174126
202. *Kun V. Tian, Francesca Passaretti, Adelaide Nespoli, Ernesto Placidi, Carla Andreani, Silvia Licoccia, Roberta Condò, Gregory A. Chass, Roberto Senesi and Paola Cozza*
 "Composition-nanostructure predictions of performance in stainless steel archwires"
Nanomaterials **9**, 1119 (2019)

201. *L. Arcidiacono, A. Parmentier, G. Festa, M. Martinòn-Torres, C. Andreani and R. Senesi*
"Validation of a new data-analysis software for multiple-peak analysis of γ spectra at ISIS pulsed Neutron and Muon Source"
Nuclear Inst. and Methods in Physics Research A: Accelerators, **A 938**, 51–55 (2019)
<https://doi.org/10.1016/j.nima.2019.05.094>
200. *G. Festa, T. Christiansen, V. Turina, M. Borla, J. Kelleher, L. Arcidiacono, L. Cartechini, R. C. Ponterio, C. Scatigno, R. Senesi and C. Andreani*
"Egyptian metallic inks on textiles from the 15th century BCE unravelled by non-invasive techniques and chemometric analysis"
Scientific Reports **9**, Article number: 18001 (2019)
<https://www.nature.com/articles/s41598-019-54735-5>
199. *G. Festa, C. Andreani, F. D'Agostino, V. Forte, M. Nardini, A. Scherillo, C. Scatigno, R. Senesi, L. Romano*
"Sumerian Pottery Technology Studied Through Neutron Diffraction and Chemometrics at Abu Tbeirah (Iraq)."
Geosciences **9**, 74 (2019)
doi:10.3390/geosciences9020074
198. *G. Festa, C. Andreani, M. Baldoni, C. Martínez-Labarga, F. Martini, O. Rickards, M.F. Rolfo, R. Senesi, F. R. Stasolla, V. Cipollari, S.F. Parker, A. R. Vassalo, L. A. E. Batista de Carvalho and M. P. M. Marques*
"First analysis of Ancient Burned Skeletal Human Remains Probed by Neutron and Optical Vibrational Spectroscopy"
Science Advances, **5**: eaaww1292 (2019)
197. *G. Festa, C. Andreani, M. Baldoni, V. Cipollari, C. Martínez-Labarga, F. Martini, O. Rickards, M.F. Rolfo, L. Sarti, N. Volante, R. Senesi, F.R. Stasolla, S.F. Parker, A.R. Vassalo, A.P. Mamede, L.A.E. Batista de Carvalho and M.P.M. Marques,*
"Old burned bones tell us about past cultures"
Spectroscopy Europe, **31**, N.4, 18-21 (2019)

196. *W. Janssens, K. Lützenkirchen, K. Mayer, K. Casteleyn, L. Duinslaeger, E. Zuleger, C. Andreani, R. Senesi, G. Albani, G. Croci, G. Gorini and R.G.M. Caciuffo*
 "Improving Resilience to Nuclear and Radiological Threats"
 The Science and Culture Series — Nuclear Strategy and Peace
 Technology International Seminars on Nuclear War and Planetary
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195. *C. Andreani, C. Corsaro, D. Mallamace, G. Romanelli, R. Senesi and F. Mallamace*
 "The onset of the tetrabonded structure in liquid water"
Science China-Physics, Mechanics & Astronomy, 62, No. 10: (2019),
<https://doi.org/10.1007/s11433-018-9408-2>
194. *P. Ulpiani, G. Romanelli, D. Onorati, A. Parmentier, G. Festa, E. Schooneveld, L. Arcidiacono, C. Andreani, R. Senesi*
 "Optimization of detection strategies for epithermal neutron
 spectroscopy using photon-sensitive detectors"
Rev Sci Instrument **90**, 073901 (2019)
 doi: 10.1063/1.5091084
193. *Matteo Zanetti, Stefano Bellissima, Leonardo del Rosso, Federico Masi, Mohammad Chowdhury, Antonio De Bonis, Lorenzo Di Fresco, Claudia Scatigno, Jeff Armstrong, Svemir Rudic, Stewart Parker, Monika Hartl, Daniele Colognesi, Roberto Senesi, Carla Andreani, Giuseppe Gorini, Felix Fernandez-Alonso*
 "Neutronic Developments on TOSCA and VESPA: Progress to Date"
Physics B: Condensed Matter, **562**, 107-111, 1 (2019)
192. *G. Festa, G. Sancesario, C. Corsaro, S. Longo, D. Mallamace, E. Fazio, L. Arcidiacono, V. Garcia Sakai, R. Senesi, G. Sancesario, F. Mallamace, C. Andreani*
 "SANS study of Amyloid β ₁₋₄₀: Unfolded monomers in DMSO,
 multidimensional aggregates in water medium"
Physica A **A517**, 385–391 (2019)
191. *A Cianchi, C. Andreani, R. Bedogni, G. Festa, O. Sans Planell, R. Senesi*

- "Towards a compact Laser based Neutron source"
Journal of Physics: Conference Series **1021** (1), 012011, (2018)
190. *C. Andreani, Giovanni Romanelli, and Roberto Senesi*
Correction to "Direct measurements of quantum kinetic energy tensor in stable and metastable water near the triple point: an experimental benchmark"
Journal of Physical Chemistry Letters **9** (7), 1527–1527 (2018)
189. *M. Krzystyniak, G. Romanelli, M. Fabian, M. Gutmann; G.Festa, L. Arcidiacono, Martyn Gigg, K. Druzbecki, C. Andreani, R. Senesi, and F. Fernandez-Alonso*
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188. *G. Romanelli, G. Festa, M. Krzystyniak, C. Andreani, F. Fernandez-Alonso and R Senesi*
"Neutrons matter: VII international workshop on electron-Volt neutron spectroscopy – A preface to the workshop proceedings"
Journal of Physics: Conference Series **1055** 011001, (2018)
- 187 *G. Romanelli, M. Krzystyniak, G. Festa, C. Andreani, F. Fernandez-Alonso and R Senesi*
"The road to a station for epithermal and thermal neutron analysis"
Journal of Physics: Conf. Series **1055** 012017, (2018)
doi :10.1088/1742-6596/1055/1/012017
- 186 *M. Nardini, C. Andreani, R Senesi, A. Scherillo, F. D'Agostino, L. Romano, C. Scatigno, and G. Festa*
"Neutron resonance capture analysis and chemometric tools: An integrated approach"
Journal of Physics: Conf. Series **1055**, 012005 (2018)
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185. *Giulia Festa, Triestino Minniti, Laura Arcidiacono, Matilde Borla,*

Daniela Di Martino, Federica Facchetti, Enrico Ferraris, Valentina Turina, Winfried Kockelmann, Joe Kelleher, Roberto Senesi, Christian Greco, and Carla Andreani

"Egyptian Grave Goods of Kha and Merit Studied by Neutron and Gamma Techniques"

Angew. Chem., **130**, 1 – 6, (2018)

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184. *A. Parmentier, L. Arcidiacono, R. Senesi, G. Romanelli, C. Andreani, J. Moir, and G. Festa*

"Absolute efficiency calibration of a coaxial HPGe detector for quantitative PGAA and T-PGAA"

Journal of Physics: Conference Series, **1055** (1), 012010, (2018).

183. *D. Onorati, C. Andreani, L. Arcidiacono, F. Fernandez-Alonso, G. Festa, M. Krzystyniak, G. Romanelli, P. Ulpiani, R. Senesi*

"Gamma background characterization on VESUVIO: before and after the moderator upgrade"

Journal of Physics: Conference Series, **1055** (1), 012009 (2018)

182. *P. Ulpiani, G. Romanelli, L. Arcidiacono, D. Onorati, G. Festa, M. Krzystyniak, E. M. Schooneveld, F. Fernandez-Alonso, C. Andreani, R. Senesi*

"Enhancement of counting statistics and noise reduction in the forward scattering detectors installed on the VESUVIO spectrometer"

Journal of Physics: Conference Series, **1055** (1), 012008 (2018)

181. *M. Ottavi, D. Ascioffa, T. Fiorucci, E. Grosso, C. Marzullo, A. Scaramella, S. Stramaccioni, A. Zibecchi, C. Andreani, G. C. Cardarilli, C. Cazzaniga, L. Di Nunzio, R. Fazzolari, M. Re, P. Reviriego, G. Furano, R. Senesi*

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180. **C. Andreani**, R. Senesi, A. Paccagnella, M. Bagatin, S. Gerardin, C. Cazzaniga, C. D. Frost, P. Picozza, G. Gorini, R. Mancini, M. Sarno
 "Fast neutron irradiation tests of Flash memories used in space environment at the ISIS spallation neutron source"
AIP Advances **8**, 025013 (2018)
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179. A. Cianchi, **C. Andreani**, R. Bedogni, G. Festa, O. Sans-Planell, R. Senesi
 "A complementary compact laser based neutron source"
Nuclear Inst. and Methods in Physics Research, **A909**, 323–326 (2018), <https://doi.org/10.1016/j.nima.2018.01.052>
178. A. Parmentier, **C. Andreani**, G. Romanelli, J. J. Shephard, C. G. Salzmann and R. Senesi
 "Hydrogen mean force and anharmonicity in polycrystalline and amorphous ice"
Frontiers of Physics **13**(1), 136101 (2018)
177. G. Romanelli, S. Rudic, M. Zanetti, **C. Andreani**, F. Fernandez-Alonso, G. Gorini, M. Krzystyniak, G. Skoro
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Nuclear Inst. and Methods in Physics Research, **A 888**, 88–95, (2018)
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176. A. Fedi, M. Ottavi, G. Furano, A. Bruno, R. Senesi, **C. Andreani**, C. Cazzaniga
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175. **C. Andreani**, R. Senesi, M. Krzystyniak, G. Romanelli and F. Fernandez-Alonso

- "Experimental studies of nuclear quantum effects in condensed matter: the case of water"
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174. *R. Senesi, Giuseppe Gorini, Carla Andreani*
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Il Nuovo Saggiatore, **33**, 15-20, (2017)
173. *G. Festa, Carla Andreani, L. Arcidiacono, G. Burca, W. Kockelmann, T. Minniti, R. Senesi*
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172. *C. Andreani, F. Aliotta, L. Arcidiacono, M. Borla, D. Di Martino, F. Facchetti, E. Ferraris, G. Festa, G. Gorini, W. Kockelmann, J. Kelleher, D. Malfitana, D. Micieli, T. Minniti, E. Perelli Cippo, R. Ponterio, G. Salvato, R. Senesi, V. Turina, C. Vasi and C. Greco*
 "A neutron study of sealed pottery from the grave-goods of Kha and Merit"
Journal of Analytical Atomic Spectrometry, **32**, 1342- 1347 (2017)
 DOI:10.1039/c7ja00099e
171. *Kun V. Tian, Giulia Festa, László Szentmiklósi, Boglárka Maróti, Laura Arcidiacono, Giuseppina Laganà, Carla Andreani, Silvia Licoccia, Roberto Senesi, Paola Cozza*
 "Compositional studies of functional orthodontic archwires using prompt -gamma activation analysis at a pulsed neutron source"
Journal of Analytical Atomic Spectrometry **32**, 1420 (2017)
 DOI: 10.1039/c7ja00065k
170. *G Romanelli, M Krzystyniak, R Senesi, D. Raspino, J Boxall, D Pooley, S Moorby, E Schooneveld, N J Rhodes, C Andreani and F Fernandez-Alonso*
 "Characterisation of incident beam and current diffraction capabilities on the VESUVIO spectrometer"

- Measurement Science and Technology* **28**, Number 9, 095501 (2017).
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169. Kun V. Tian, Giulia Festa, Francesco Basoli, Giuseppina Laganà, Antonella Scherillo, **Carla Andreani**, Patrizia Bollero, Silvia Licoccia, Roberto Senesi and Paola Cozza
"Orthodontic archwire composition and phase analyses by neutron spectroscopy"
Dental Material Journal (2017), Article ID: 2016-206
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168. **C. Andreani**, M. Krzystyniak, G. Romanelli, R. Senesi and F. Fernandez-Alonzo
"Electron-volt neutron spectroscopy: beyond fundamental systems"
Advances in Physics **66**, 1-73, (2017)
167. G. Romanelli, A. Liscio, R. Senesi, R. Zamboni, E. Treossi, F. Liscio, G. Giambastiani, V. Palermo, Felix Fernandez-Alonso and **C. Andreani**
"Self confinement of water in graphene-oxide Membranes"
Carbon **108**, 199-203 (2016)
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166. I. S. Anderson, **C. Andreani**, J. Carpenter, G. Festa, G. Gorini, C.-K Loong, R. Senesi
"Research Opportunities with Compact Accelerator-Driven Neutron Sources"
Physics Reports **654**, 1–58 (2016)
<http://dx.doi.org/10.1016/j.physrep.2016.07.007>
165. E. M. Schooneveld, A. Pietropaolo, **C. Andreani**, E. Perelli Cippo, N. J. Rhodes, R. Senesi, M. Tardocchi, G. Gorini
"Radiative neutron capture as a counting technique at pulsed spallation neutron sources: a review of current progress"
Reports on Progress in Physics **79**, 094301 (2016)
164. **C. Andreani**, Giovanni Romanelli, and Roberto Senesi
"Direct measurements of quantum kinetic energy tensor in stable

- and metastable water near the triple point: an experimental benchmark"
Journal of Physical Chemistry Letters **7**(12), 2216–2220 (2016)
163. *Giulia Festa, Laura Arcidiacono, Alfio Pappalardo, Triestino Minniti, Carlo Cazzaniga, Antonella Scherillo, **Carla Andreani** and Roberto Senesi*
"Isotope identification capabilities using time resolved prompt gamma emission from epithermal neutrons"
Published on JINST **11**, (2016), doi:[10.1088/1748-0221/11/03/C03060](https://doi.org/10.1088/1748-0221/11/03/C03060)
162. *I. Bukreeva, A. Mittone, A. Bravin, M. Alessandrelli, P. Coan, V. Formoso, R. G. Agostino, M. Giocondo, F. Ciuchi, M. Fratini, G. Festa, **C. Andreani**, R. Bartolino, A. Lamarra, G. Gigli, G. Ranocchia, A. Cedola*
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161. *G. Romanelli, R. Senesi, Xuan Zhang, Kian Ping Loh and **C. Andreani***
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160. *A. Parmentier, J. J. Shephard, G. Romanelli, R. Senesi, C. G. Salzmann and **C. Andreani***
"Evolution of Hydrogen Dynamics in Amorphous Ice with Density"
Journal of Physical Chemistry Letters **6**, 2038-2042 (2015)
159. *G. Festa, E. Perelli Cippo, D. Di Martino, R. Cattaneo, S. Senesi, **C. Andreani**, E. Schooneveld, W. Kockelmann, N. Rhodes, A. Scherillo, K. Kudejova, K. Biro, K. Duzs, Z. L. Hajna and G. Gorini*
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Journal of Analytical Atomic Spectrometry **30**, 745 (2015)
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158. *G. Gorini G, G. Festa and C. Andreani*
 "Epithermal neutron instrumentation at ISIS"
Journal of Physics, Conference Series **571**, 012005 (2014)
 doi:10.1088/1742-6596/571/1/012005
157. *C. Andreani, M. Ceriotti, F. Fernandez-Alonso, G. Gorini, M. Krzystyniak, A. Parmentier, S. Parker, A. Seel, R. Senesi R and L. Walewski*
 "Discussion: Measurement and Instrumentation"
Journal of Physics, Conference Series **571**, 012010 (2014)
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156. *G. Romanelli, F. Fernandez-Alonso and C. Andreani*
 "The Harmonic Picture of Nuclear Mean Kinetic Energies in Heavy Water"
Journal of Physics, Conference Series **571**, 012003—012009 (2014)
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155. *C. Andreani, M. Ceriotti, G. Chass, C. Drechsel-Grau, F. Fernandez-Alonso, N. Greaves, N. Gidopolous, M. Krzystyniak, A. Parmentier, K. Refson, G. F. Reiter, G. Romanelli, A. Seel, L. Walewski and T. Wiles*
 "Discussion: Nuclear Quantum Dynamics – Protons and Beyond"
Journal of Physics, Conference Series **571**, 012004 (2014)
 doi:10.1088/1742-6596/571/1/012004
154. *R. Senesi, A. I. Kolesnikov, C. Andreani*
 "Measurement of proton momentum distribution using a direct geometry instrument"
Journal of Physics, Conference Series **571**, 012007--012019 (2014)
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153. *Alice Miceli, Giulia Festa, Roberto Senesi, Enrico Perelli Cippo, Luca Giacomelli, Marco Tardocchi, Antonella Scherillo, Erik Schooneveld, Christopher Frost, Giuseppe Gorini and Carla Andreani*
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152. *G. Festa, G. Tardino, L. Pontecorvo, D. C. Mannes, R. Senesi, G. Gorini, C. Andreani*
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151. *C. Andreani, I. S. Anderson, J. M. Carpenter, G. Festa, G. Gorini, C.-K. Loong, and R. Senesi*
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150. *A. Miceli, G. Festa, R. Senesi, G. Gorini, C. Andreani*
"Localization of inclusions in multiple prompt gamma ray analysis: a feasibility study"
Journal of Physics: Conference Series **470**, 012001 (2013)
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149. *A. Miceli, G. Festa, G. Gorini, R. Senesi, C. Andreani*
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148. *R. Senesi, G. Romanelli, M. A. Adams and C. Andreani*
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146. *A. Miceli, G. Festa, R. Senesi, G. Gorini, E. Perelli Cippo, R. Cattaneo, C. Andreani*
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92. *Carla Andreani*
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91. *Carla Andreani*
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91. *Carla Andreani*
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89. *Carla Andreani*
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87. *Carla Andreani*
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84. *Carla Andreani*
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83. *Carla Andreani*
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80. *Carla Andreani*
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79. *Carla Andreani*
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74. *Carla Andreani*
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73. *Carla Andreani*
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53. **C. Andreani**
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44. *C. Andreani*
"Neutron techniques applied to Cultural Heritage"

Comunicazione su invito, International Summer School in Conservation of Historical, Monumental and Archaeological Sites, Università di Roma Tor Vergata, Luglio 2009

43. *C. Andreani*

"Deep Inelastic Neutron Scattering in liquid water"

Comunicazione su invito al London Centre of Nanotechnology, 17 Dicembre 2008

42. *C. Andreani*

"Illuminating the past: neutron a tool for Cultural Heritage"

Comunicazione su invito al YICGG 2008, second edition, Research Competition 2008 Workshop "Global Governance: Growth and Innovation 2020" Rome, August 18 – 27, 2008

41. *C. Andreani*

"I neutroni, una sonda per l'indagine dei beni culturali"

Comunicazione su invito al *Convegno Scienza Orienta Tor Vergata* Facoltà di Scienze MM.FF.NN. Febbraio 2008

40. *C. Andreani*

"Quando i neutroni non hanno segreti"

Comunicazione su invito al *Convegno Scienza orienta Tor Vergata* Facoltà di Scienze MM.FF.NN. 12 Febbraio 2007

39. *C. Andreani*

"Investigation of Archaeological Artefacts using Neutron Spectroscopy with eV neutrons"

Comunicazione su invito al *Workshop on Neutron and Imaging 2006* – IAN2006, 23-26th October 2006, Oak Ridge (Tennessee, USA).

38. *C. Andreani*

"Proton mean kinetic energy of water in sub- and super- critical conditions"

Comunicazione su invito Workshop *Progress in Electron Volt Neutron Spectroscopy*, IV edition Perspectives in Neutron

Spectroscopy at High Energy, 22 October 2006, Oalk Ridge (Tennessee-USA).

37. **C. Andreani**

"EURICA-EUropean Research Infrastructure for Conservation and Analysis (from RICH initiative)

Comunicazione su invito al Convegno 'Tecnologie (Digitali) e valorizzazione del Patrimonio Culturale, 19 Luglio (2006), Ex Chiesa di Santa Marta-Ministero dei Beni Culturali, Roma.

36. **C. Andreani**

"Investigation of marbles from VILLA ADRIANA via Neutron diffraction'

Comunicazione su invito al Workshop Neutron and Archaeology, 29 March 2005, Budapest, (Hungary).

35. **C. Andreani**

"Single particle dynamics in fluid $^3\text{He}, ^4\text{He}$ and $^3\text{He}/^4\text{He}$ liquid mixtures"

Comunicazione su invito al International Conference on Neutron Scattering, Sydney, Australia il 27/11- 2/12 2005.

34. **C. Andreani**

"High Energy Inelastic Neutron Scattering on VESUVIO"

Comunicazione su invito Workshop Progress in Electron Volt Neutron Spectroscopy, III edition Perspectives in Neutron Spectroscopy at High Energy, Santa Fe, New Mexico, USA. 24th April 2005.

33. **C. Andreani**

"Principles and methods of Neutron Spectroscopy at the eV energies: Deep and High Energy Inelastic Neutron Scattering"

Lezioni tenute in veste di docente della VII School of neutron Scattering Francesco Paolo Ricci, 21 Settembre 2 Ottobre 2004 Palau, (SS).

32. **C. Andreani**

- "Short-time single particle dynamics in quantum and molecular systems
Comunicazione su invito all'European Conference on Neutron Scattering Montpellier-Francia 2-5 Settembre 2003
31. **C. Andreani**
"Epithermal neutron scattering: present and future perspectives"
Comunicazione su invito all'ILL (Grenoble-Francia) ILL 23 Giugno 2003
30. **C. Andreani**
"Single-particle dynamics in quantum system"
Comunicazione su invito al LXXXVIII Congresso Nazionale della Societa' Italiana di Fisica, Alghero, 26 settembre - 1 ottobre 2002
29. **C. Andreani**
"The e-VERDI Project"
Comunicazione su invito alla Neutron Round Table - Joint RTD Network - European Conference 'ESS – The European Spallation Source, the European Source of Science Bonn 16-17 Maggio 2002.
28. **C. Andreani**
"The single particle dynamical properties of matter studied by Neutron Spectroscopy at the eV energies: VESUVIO Project"
Comunicazione su invito in occasione dell'inaugurazione dello spettrometro VESUVIO-Rutherford Appleton Laboratory (ISIS) 15 April 2002
27. **C. Andreani**
"Dinamica di singola particella in sistemi molecolari e quantistici"
Comunicazione su invito LXXXVII Congresso Nazionale della Societa' Italiana di Fisica, 24-29 Settembre, Milano, Universita' degli Studi di Milano-Bicocca (2001).
26. **C. Andreani**
"Dynamics in quantum system: neutron spectroscopy with eV neutrons"

- Comunicazione su invito al convegno "F. P. Ricci: His legacy and future perspectives of neutron spectroscopy" Roma 26 Ottobre 2000*
25. **C. Andreani**
"Scattering anelastico in sistemi molecolari e quantistici"
Docente alla V Scuola di Spettroscopia di Neutroni F. P. Ricci, Palau (SS) 23 Settembre – 3 Ottobre 2000
 24. **C. Andreani**
"Spectroscopy with eV neutrons"
Comunicazione su invito tenuto all'Istituto ILL (Grenoble-Francia) 5 Giugno 2000.
 23. **C. Andreani**
"Neutron spectroscopy with eV neutrons"
Comunicazione su invito al 6th European Spallation Source, General Meeting 20-22 September 1999 Ancona –Italy
 22. **C. Andreani**
"Single particle dynamics in fluid hydrogen and deuterium"
Comunicazione su invito alla "European Physical Society- IV Liquid Matter Conference" Granada (Spagna) Luglio 1999
 21. **C. Andreani**
"Spettroscopia con neutroni epitermici"
Docente alla IV Scuola di Spettroscopia di Neutroni, Palau (SS) Settembre 1998
 20. **C. Andreani**
"Deep inelastic neutron scattering from fluid H₂ and D₂"
Comunicazione su invito al Congresso Nazionale INFN – Rimini Giugno 1998
 19. **C. Andreani**
VESUVIO- "A project to provide enhanced neutron scattering capability at the highest energy transfer"

Comunicazione su invito al Meeting "Neutron Scattering Instrumentation Workshop – Studsvik, Svezia 6 Ottobre 1997.

18. **C. Andreani**

"Kinetic energy in ^4He through the superfluid transition and Bose condensation by High Energy Neutron Scattering"
Comunicazione al Congresso Nazionale INFM Chia Laguna (Ca) 19-23 Maggio 1997.

17. **C. Andreani**

"Inelastic and quasi-elastic dynamics in superoxide dismutase"
Comunicazione su invito al Workshop on " Inelastic and quasi-elastic Neutron scattering in Biology" ILL Grenoble France 14-15 Ottobre 1996

16. **C. Andreani**

"Scattering anelastico e quasi-elastico nella Superossido Dismutase"
Comunicazione alla III Scuola di Diffrazione e Spettroscopia neutronica, Cala Capra, Palau (SS) 26 Settembre - 6 Ottobre 1996

15. **C. Andreani**

"Proton momentum distributions in fluid H_2 "
Comunicazione a congresso della "European Physical Society -5th General Conference of the Condensed matter Division". Aprile 22-25 1996 Baveno Stresa Italia.

14. **C. Andreani**

The impulse approximation in molecular fluids".
Comunicazione su invito al Workshop, "The use of high energy neutrons in spectroscopy", tenutosi al Rutherford Appleton Laboratory (UK) il 4 Maggio 1995.

13. **C. Andreani**

The atomic momentum distribution of liquid deuterium: a comparison between experiment and theory".
Comunicazione alla Conferenza internazionale "2nd Liquid Matter Conference" Firenze 18-22 Settembre 1993

12. **C. Andreani**
"Is hydrogen bond present in hydrogen halides other than HF?"
Comunicazione alla Nato Advanced Research Workshop on Hydrogen Bond Networks tenutasi a Cargese, Corsica (Francia) 16-22 Agosto 1993
11. **C. Andreani**
"Deriving the asymptotic scaling function in Deep Inelastic Neutron Scattering."
Comunicazione su invito al Workshop internazionale "Highlights in the Physics of Liquids: Experimental opportunities from the Neutron and Synchrotron Radiation Sources" Trieste 19 - 29 Luglio 1993
10. **C. Andreani**
"Neutron diffraction studies of molecular liquids"
Comunicazione su invito alla "Scuola di Spettroscopia Neutronica e Raggi X" Montelibretti 12-21 ottobre 1992
9. **C. Andreani**
"The state of art in the field of microscopic structure in diatomic molecular liquids"
Comunicazione su invito al workshop internazionale "Molecular and Complex Liquids" Universita' "La Sapienza" Roma settembre 7-8 1992
8. **C. Andreani**
"Orientational Correlations in Liquid Iodine"
Comunicazione al "Symposium on the Physics of Molecular Liquids" Oxford (UK) 1-4 Aprile 1991
7. **C. Andreani**
"Hydrogen Projected vibrational density of states in hydrogenous molecular solids"
Comunicazione al Congresso "H-bond Physics" tenutasi a Il Ciocco Lucca 11-14 Settembre 1990

6. ***C. Andreani***
 "Le esperienze di diffrazione neutronica condotte dai gruppi italiani presso la sorgente ISIS del Rutherford Appleton Laboratory"
Comunicazione su invito al Convegno della Societa' Italiana di Spettroscopia Neutronica, SISN, tenutosi al CNR nel febbraio 1990
5. ***C. Andreani***
 "Lo scattering di neutroni epitermici presso la sorgente ISIS del Rutherford Appleton Laboratory"
Comunicazione su invito al Convegno della Societa' Italiana di Spettroscopia Neutronica, SISN, tenutosi al CNR nel febbraio 1989
4. ***C. Andreani***
"Impulsive neutron scattering at ISIS"
Comunicazione al IX General conference of the Condensed Matter Division- Nice 6-9 Marzo 1989
3. ***C. Andreani***
 "Deep inelastic neutron scattering from hydrogenous solids"
Comunicazione al International Symposium: "Neutron scattering at ISIS: recent highlights in condensed matter research" - svoltosi a Villa Mondragone (Monteporzio Catone) 14-16 Dicembre 1988
2. ***C. Andreani***
 "Inchoerent inelastic neutron scattering on polycrystalline ice Ih"
Comunicazione al Symposium on Neutron Scattering, Berlino Ovest (6-8 Agosto 1984)
1. ***C. Andreani***
 "Measurements of internal stress within bulk materials using neutron diffraction"
Comunicazione alla II General Conference of the Condensed Matter Division of the EPS (European Physical Society), Manchester U.K. (22-25 Marzo 1982)
4. **LIBRI DI CONFERENZE E PROCEEDINGS (selezione)**

1. *P. Morales, C. Andreani, D. Rocca*
"Dinamica riorentazionale di HCl in fase liquida mediante scattering della luce"
Proceedings del VI Congresso Annuale del settore di Fisica Atomica e Molecolare del GNSM - Perugia (28 Febbraio 1981).
2. *C. Andreani, P. Bosi, E. Mazzega, F. Sacchetti, C.G. Windsor*
"Observations of the dispersion relation of the O-D stretching modes in heavy ice "
Proceedings del Conferenza "The neutron and its applications" Cambridge, (13-17 settembre 1982)
3. *A. J. Allen, C. Andreani, M. T. Hutchings, C. M. Sayers, C. G. Windsor*
"Measurements of internal stress within bulk materials using neutron scattering"
Proceedings del Conferenza per il 50 dalla scoperta del Neutrone "The neutron and its applications" Cambridge, (13-17 settembre 1982)
4. *C. Andreani, G. Jacucci, A. Rahman*
"Lattice dynamics of a central force model for ice"
Proceedings del I Workshop Trentino di calcoli a macchina in meccanica statistica (1-28 Febbraio 1983)
5. *A. J. Allen, C. Andreani, M.T. Hutchings, C.M. Sayers, C.G. Windsor*
"Neutron diffraction studies of texture and residual stress in weldments"
Proceedings del V Congresso Internazionale di Metallurgia e Scienza dei Materiali di Riso, Danimarca (3-7 Settembre 1984)
6. *C. Andreani, F. Cilloco, L. Nencini, D. Rocca*
"Measurements of the liquid bromine structure factor $S(Q)$ at $T=30C$ and $T=200C$ along the coexistence curve by neutron diffraction"
Proceedings del "Annual Symposium on Neutron Scattering", Berlino Ovest (6-8 Agosto 1984)
7. *C. Andreani, V. Merlo, M.A. Ricci*

- "Vibrational density of states in polycrystalline sulphuric acid"
*Proceedings del Workshop "Neutron scattering in molecular solids",
Grenoble 12-15 Luglio 1988*
8. **C. Andreani, V. Merlo, M.A. Ricci**
"The structure of deuterium sulphide. A pulsed neutron scattering experiment at ISIS "
Proceedings del International Symposium: "Neutron scattering at ISIS: recent highlights in condensed matter research" - svoltosi a Villa Mondragone (Monteporzio Catone) 14-16 Dicembre 1988
 9. **C. Andreani, G. Baciocco, R. Holt, J. Mayers**
"Resolution in deep inelastic neutron scattering using pulsed sources"
Proceedings del Workshop on Momentum distributions 24-26 ottobre 1988 Argonne National Laboratory (USA)
 10. **C. Andreani, G. Baciocco, J. Mayers**
"Initial state effects in deep inelastic neutron scattering"
Proceedings del Workshop on Momentum distributions 24-26 ottobre 1988 Argonne National Laboratory (USA)
 11. **C. Andreani, U. Buontempo, J. Mayers, F.P. Ricci**
"Energy resolved neutron radiography"
Proceedings del Symposium on Neutron Scattering Bombay India (20 -25 Gennaio (1991)
 12. **C. Andreani, M. Nardone, F. P. Ricci**
"Partial Structure factors and orientational correlations in liquid HI"
Proceedings del Workshop "International workshop on the methods in the determination of partial structure factors of disordered matter by neutron and anomalous x-ray diffraction." Grenoble (F) 10 -11 settembre (1992)
 13. **C. Andreani, A. Filabozzi, A. Deriu, D. Di Cola, F. Menzinger, A. Desideri**
"Internal dynamics of hydrated Cu/Zn Superoxide Dismutase"

- Proceedings** Congresso Nazionale di Fisica della Materia di Brescia (13-16 giugno 1994).
14. *C. Andreani, D. Colognesi, A. Filabozzi, F. Menzinger,*
"An X-ray Diffraction Study of Liquid Chlorine"
Proceedings Congresso Nazionale di Fisica della Materia di Brescia (13-16 giugno 1994).
 15. *C. Andreani, A. Filabozzi, A. Deriu*
"Dynamics of hydrogen atoms in superoxide dismutase "
Proceedings del International Workshop: QuasiElastic Neutron Scattering - QENS 95 Parma Italy Settembre 7-8 (1995).
 16. *C. Andreani, A. Filabozzi, A. Deriu, D. Di Cola, F. Menzinger, A. Desideri*
"Dynamics of Cu/Zn Superoxide Dismutase"
Proceedings Congresso Internazionale QENS'95 di Parma (7-8 settembre 1995).
 17. *C. Andreani, A. Deriu, A. Filabozzi, D. Russo*
"Temperature dependence of low frequency dynamics of Superoxide Dismutase derived by quasi-elastic and inelastic neutron scattering"
Proceedings Convegno annuale SISN-SILS, Roma 25-27 Giugno 1996.
 18. *C. Andreani, A. Deriu, A. Filabozzi, D. Russo*
"Temperature dependence of low frequency dynamics by inelastic neutron scattering"
Proceedings 1st European Conference on Neutron Scattering, ECNS'96, Interlaken (CH), 8-11 Ottobre, 1996
 19. *C. Andreani, D. Colognesi, A. Filabozzi, M. Nardone, R. Azuah*
"Temperature dependence of single particle kinetic energy in liquid parahydrogen"
Proceedings 1st European Conference on Neutron Scattering, ECNS'96, Interlaken (CH), 8-11 Ottobre, 1996.
 20. *C. Andreani, D. Colognesi, A. Filabozzi, M. Nardone, E. Pace*

"Deep inelastic neutron scattering from dense fluid parahydrogen"
Scientific Highlights in ISIS (1997) *Annual Report* - pag 60.

21. **C. Andreani, D. Colognesi, A. Filabozzi,**
"Atomic and molecular momentum distributions in quantum fluids
by Compton Neutron Scattering"
Proceedings 1st European Conference on Neutron Scattering,
ECNS'96, Interlaken (CH), 8-11 Ottobre, 1996.
22. **C. Andreani, M.A. Ricci, M. Nardone, F. P. Ricci**
"Orientational Correlations in liquid hydrogen halides: the special
case of HCl"
Proceedings VIII Congresso Nazionale della Societa di Spettroscopia
Neutronica Roma 7-9 Ottobre 1997.
23. **C. Andreani, D. Colognesi, E. Degiorgi, M. Nardone, R. Senesi**
"VESUVIO Project"
Proceedings Congresso Nazionale dell'INFM Rimini Giugno 1998.
24. **C. Andreani, D. Colognesi, E. Degiorgi, M. Nardone, R. Senesi**
"VESUVIO Project"
Proceedings Congresso Nazionale dell'INFM Catania Giugno 1999.
25. **C. Andreani, D. Colognesi and R. Senesi**
" Kinetic energy in low density supercritical ^4He "
Proceedings della EPS- IV Liquid Matter Conference"- Granada
(Spagna) Luglio (1999)
26. **J Tomkinson, ZA Bowden, J Mayers, J Norris, NJ Rhodes, C Andreani,**
D Colognesi, AL Fielding, M Nardone, M Praitano
[VESUVIO. A project to provide enhanced neutron scattering
capabilities at the highest energy transfers](#)
Book Conference proceedings. ECNS'99. 2. European conference on
neutron scattering (1999)
27. **C.Andreani**
"Spectroscopy with eV neutrons "

Atti della Convegno "F. P. Ricci: His legacy and future perspectives of neutron spectroscopy" Roma 26 Ottobre (2000), SIF, Editrice Compositori Bologna.

28. **C. Andreani, D. Colognesi, E. Degiorgi, M. Nardone, R. Senesi**
"VESUVIO Project"
Proceedings Congresso Nazionale dell'INFM Genova Giugno 2000.
29. **C. Andreani, A. Pietropaolo,**
"The Resonance Detector Technique for Deep Inelastic Neutron Scattering on eVS spectrometer", *Proceedings* al congresso annuale della **SISN**, Roma 8-10 October 2000;
30. **C. Andreani, D. Colognesi, E. Degiorgi, M. Nardone, R. Senesi**
"VESUVIO Project".
Proceedings Congresso Nazionale dell'INFM Roma June 2001.
31. **R. Senesi, C. Andreani, D. Colognesi, A. Cunsolo, M. Nardone**
"Kinetic energy in solid ^3He from deep inelastic neutron scattering", *Societa' Italiana di Fisica, Atti di Conferenze* **76**, 97-104 (2001).
32. **R. Senesi, C. Andreani, D. Colognesi**
"Single Particle kinetic energy in solid and dense liquid ^3He .
Scientific Highlights in *ISIS 2001 Annual Report - CCLRC Rutherford Appleton Laboratory (UK) pag 60.*
33. **C. Andreani, A. Pietropaolo, A. D'Angelo, G. Gorini, R. Senesi, M. Tardocchi**
"γ detectors for Deep Inelastic Neutron Scattering in the 1-100 eV region"
Proceedings International Conference on Neutron Scattering, München, 9.-13. September 2001
34. **C. Andreani, Tardocchi, A. D'Angelo, G. Gorini, S. Imberti, A. Pietropaolo, N. Rhodes, E. Schooneveld, R. Senesi**
"Sviluppo di un rivelatore di neutroni epitermici per spettroscopia dei materiali in regime di diffusione altamente anelastica"

Proceedings Congresso Annuale SISN (Societa' Italiana di Spettroscopia di Neutroni) Milazzo October 2001.

35. *J. Tomkinson, C. Andreani, R. Newport, G. Gorini, J. Mayers, A. D'Angelo, N. Rhodes, E. Schooneveld, Z. Bowden and, R. Coleman 1*
"The eVERDI project: Electron-Volt Energy Resonance Detector Instrument"
Proceedings European Conference Bonn 16-17 May 2002 'ESS – The European Spallation Source/The European Source of Science'.
36. *C. Andreani, D. Colognesi, E. Degiorgi, A. Filabozzi, M. Nardone, E. Pace, A. Pietropaolo and R. Senesi,*
"Double difference method in Deep Inelastic Neutron Scattering on the VESUVIO"
Proceedings European Conference Bonn 16-17 May 2002 'ESS – The European Spallation Source/The European Source of Science'.
37. *R. Senesi, C. Andreani, D. Colognesi, A. Cunsolo and M. Nardone*
"Deep Inelastic Neutron Scattering determination of the single particle in liquid ^3He and ^3He - ^4He mixtures"
Proceedings European Conference Bonn 16-17 May 2002 'ESS – The European Spallation Source/The European Source of Science'.
38. *M.A. Ricci, C. Andreani, D. Colognesi and E. Degiorgi*
"Proton Dynamics in Supercritical Water"
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39. *J. Tomkinson, J. Mayers, T. Abdul-Redah, W. G. Stirling, A. L. Fielding, C. Andreani, M. Nardone, D. Colognesi, R. Senesi and E. Degiorgi,*
"The VESUVIO Project"
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40. *A. Pietropaolo, C. Andreani, A. D'Angelo, G. Gorini, S. Inberti, N. Rhodes, E. M. Schooneveld, R. Senesi, M. Tardocchi*

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42. *M. Tardocchi, C. Andreani, A. D'Angelo, G. Gorini, S. Imberti, A. Pietropaolo, R. Senesi*
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44. *M. Tardocchi, A. Pietropaolo, C. Andreani, G. Gorini, R. Senesi*
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45. *M. Tardocchi, A. Pietropaolo, R. Senesi, C. Andreani, G. Gorini*
"Advances in resonant detectors for epithermal neutron spectroscopy at pulsed neutron sources "
Proceedings 9th Pisa Meeting on advanced detectors, Isola d'Elba 25-31 May 2003;
46. *C. Andreani, A. Filabozzi, G. Gorini, E. Perelli-Cippo, A. Pietropaolo, R. Senesi, M. Tardocchi*

- "Assessment of a silicon detector for pulsed neutron scattering experiments",
Proceedings 3rd European Conference on Neutron Scattering
 Montpellier, 3-6 Settembre 2003.
47. *A. Pietropaolo, C. Andreani, A. D'Angelo, R. Senesi, S. Imberti, G. Gorini, M. Tardocchi, E. Perelli-Cippo, N. Rhodes, E. Schooneveld*
 "Photon detectors for epithermal neutron scattering at high- $\hbar\omega$ and low- q "
Proceedings 3rd European Conference on Neutron Scattering,
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 "Condensed matter studies with 20-100 eV neutrons: effective detection systems for High Inelastic Neutron Scattering and Deep Inelastic Neutron Scattering".
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Proceedings del Primo Incontro Internazionale, "Rileggere l'Antico. Architetture di epoca imperiale: metodi, tecniche e modelli a confronto", Roma, 13-15 dicembre (2004), Complesso monumentale S. Michele a Ripa

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La sottoscritta esprime il proprio consenso affinché i dati personali forniti possano essere trattati, nel rispetto del Decreto Legislativo 196/2003, per gli adempimenti connessi alla presente procedura.

Carla Andreani

A handwritten signature in black ink, appearing to read 'Carla Andreani', written in a cursive style.