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Publons / Web Of Science ResearcherID: A-5142-2019

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Education Information

Post Doctorate, Türk Hızlandırıcı ve Işınım Laboratuvarı (TARLA-FEL), TARLA-FEL Projesi Altyapı Grubu, Turkey 2023 - Continues

Doctorate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Fizik Anabilimdalı, Turkey 2013 - 2020

Doctorate, Istituto Nazionale Di Fisica Nucleare Laboratori Nazionali Del Sud, Istituto Nazionale Di Fisica Nucleare , Dipartimento Di Fisica , Italy 2018 - 2018

Doctorate, Istituto Nazionale Di Fisica Nucleare Laboratori Nazionali Del Sud, Istituto Nazionale Di Fisica Nucleare , Dipartimento Di Fisica, Italy 2017 - 2018

Doctorate, Istituto Nazionale Di Fisica Nucleare Laboratori Nazionali Del Sud, Istituto Nazionale Di Fisica Nucleare , Dipartimento Di Fisica , Italy 2016 - 2016

Doctorate, Technische Universitaet Darmstadt, Faculty Of Arts&Sciences, Department Of Physics , Germany 2015 - 2015

Postgraduate, Recep Tayyip Erdogan University, Fen Bilimleri Enstitüsü, Fizik Anabilimdalı, Turkey 2010 - 2013

Undergraduate, Suleyman Demirel University, Fen-Edebiyat Fakültesi, Fizik Bölümü, Turkey 2005 - 2009

Foreign Languages

Italian, A2 Elementary

English, C1 Advanced

Dissertations

Doctorate, The isoscalar monopole resonance of the alpha particle, Karadeniz Technical University, Fen Bilimleri Enstitüsü, 2020

Postgraduate, Gauss potansiyeli için Schrödinger denkleminin asimptotik iterasyon metodu kullanarak çözümü, Recep Tayyip Erdogan University, Fen Bilimleri Enstitüsü, Fizik Anabilimdalı, 2013

Research Areas

Physics, High Energy Physics, Physics, Astronomy and Astrophysics, Nuclear physics, Basic Particles and Areas, Natural Sciences

Academic Titles / Tasks

Research Assistant, Recep Tayyip Erdogan University, Fen Edebiyat Fakültesi, Fizik Bölümü, 2009 - Continues

Courses

Genel Fizik Laboratuvarı II, Undergraduate, 2021 - 2022

Modern Fizik Laboratuvarı, Undergraduate, 2021 - 2022

Genel Fizik Laboratuvarı I, Undergraduate, 2021 - 2022

Optik ve Dalgalar Laboratuvarı , Undergraduate, 2020 - 2021

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Analysis of one-proton transfer reaction in O 18 + Se 76 collisions at 275 MeV**
Cirialdo I., Cappuzzello F., Cavallaro M., Carbone D., Gargano A., De Gregorio G., Garcia-Tecocoatzi H., Santopinto E., Magaña-Vsevolodovna R., Acosta L., et al.
Physical Review C, vol.109, no.2, 2024 (SCI-Expanded)
- II. **O 18 + Ti 48 elastic and inelastic scattering at 275 MeV**
Brischetto G., Sgouros O., Carbone D., Cappuzzello F., Cavallaro M., Lubian J., De Gregorio G., Agodi C., Calvo D., Chávez Lomelí E., et al.
Physical Review C, vol.109, no.1, 2024 (SCI-Expanded)
- III. **One-neutron transfer reaction in the O 18 + Ti 48 collision at 275 MeV**
Sgouros O., Cutuli M., Cappuzzello F., Cavallaro M., Carbone D., Agodi C., De Gregorio G., Gargano A., Linares R., Brischetto G., et al.
Physical Review C, vol.108, no.4, 2023 (SCI-Expanded)
- IV. **Multichannel experimental and theoretical approach to the C 12 (O 18, F 18) B 12 single-charge-exchange reaction at 275 MeV: Initial-state interaction and single-particle properties of nuclear wave functions**
Spatafora A., Carbone D., Cappuzzello F., Cavallaro M., Acosta L., Agodi C., Amador-Valenzuela P., Borello-Lewin T., Brischetto G., Calabrese S., et al.
Physical Review C, vol.107, no.2, 2023 (SCI-Expanded)
- V. **Analysis of the one-neutron transfer reaction in O-18 + Se-76 collisions at 275 MeV**
Cirialdo I., Cappuzzello F., Cavallaro M., Carbone D., Burrello S., Spatafora A., Gargano A., De Gregorio G., Vsevolodovna R. I. M., Acosta L., et al.
PHYSICAL REVIEW C, vol.105, no.4, 2022 (SCI-Expanded)
- VI. **Multichannel experimental and theoretical constraints for the Cd-116(Ne-20, F-20)In-116 charge exchange reaction at 306 MeV**
Burrello S., Calabrese S., Cappuzzello F., Carbone D., Cavallaro M., Colonna M., Lay J. A., Lenske H., Agodi C., Ferreira J. L., et al.
PHYSICAL REVIEW C, vol.105, no.2, 2022 (SCI-Expanded)
- VII. **O 18 -induced single-nucleon transfer reactions on Ca 40 at 15.3 A MeV within a multichannel analysis**
Calabrese S., Cavallaro M., Carbone D., Cappuzzello F., Agodi C., Burrello S., De Gregorio G., Ferreira J. L., Gargano A., Sgouros O., et al.
PHYSICAL REVIEW C, vol.104, no.6, pp.1-15, 2021 (SCI-Expanded)
- VIII. **O-18 + Se-76 elastic and inelastic scattering at 275 MeV**
La Fauci L., Spatafora A., Cappuzzello F., Agodi C., Carbone D., Cavallaro M., Lubian J., Acosta L., Amador-Valenzuela P., Borello-Lewin T., et al.
PHYSICAL REVIEW C, vol.104, no.5, 2021 (SCI-Expanded)

- IX. **One-proton transfer reaction for the O-18 + Ti-48 system at 275 MeV**
Sgouros O., Cavallaro M., Cappuzzello F., Carbone D., Agodi C., Gargano A., De Gregorio G., Altana C., Brischetto G. A., Burrello S., et al.
PHYSICAL REVIEW C, vol.104, no.3, 2021 (SCI-Expanded)
- X. **Measurement of the double charge exchange reaction for the Ne-20**
Soukeras V., Cappuzzello F., Carbone D., Cavallaro M., Agodi C., Acosta L., BOZTOSUN İ., Brischetto G. A., Calabrese S., Calvo D., et al.
RESULTS IN PHYSICS, vol.28, 2021 (SCI-Expanded)
- XI. **Initial State Interaction for the Ne-20**
Carbone D., Linares R., Amador-Valenzuela P., Calabrese S., Cappuzzello F., Cavallaro M., Firat S., Fisichella M., Spatafora A., Acosta L., et al.
UNIVERSE, vol.7, no.3, 2021 (SCI-Expanded)
- XII. **An upgraded focal plane detector for the MAGNEX spectrometer**
Torresi D., Sgouros O., Soukeras V., Cavallaro M., Cappuzzello F., Carbone D., Agodi C., Brischetto G., Calabrese S., Ciraldo I., et al.
Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, vol.989, 2021 (SCI-Expanded)
- XIII. **Analysis of the background on cross section measurements with the MAGNEX spectrometer: The (20Ne, 200) Double Charge Exchange case**
Calabrese S., Cappuzzello F., Carbone D., Cavallaro M., Agodi C., Torresi D., Acosta L., Bonanno D., Bongiovanni D., Borello-Lewin T., et al.
Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, vol.980, 2020 (SCI-Expanded)
- XIV. **Analysis of two-nucleon transfer reactions in the Ne-20+Cd-116 system at 306 MeV**
Carbone D., Ferreira J. L., Calabrese S., Cappuzzello F., Cavallaro M., Hacisalihoglu A., Lenske H., Lubian J., Vsevolodovna R. I. M., Santopinto E., et al.
PHYSICAL REVIEW C, vol.102, no.4, 2020 (SCI-Expanded)
- XV. **First comparison of GEANT4 hadrontherapy physics model with experimental data for a NUMEN project reaction case**
Oliveira J. R. B., Morales M., Flechas D., Carbone D., Cavallaro M., Torresi D., Acosta L., Agodi C., Amador-Valenzuela P., Bonanno D., et al.
EUROPEAN PHYSICAL JOURNAL A, vol.56, no.5, 2020 (SCI-Expanded)
- XVI. **Be-9 + p breakup at 5.67A MeV in a full kinematics approach**
Pakou A., Sgouros O., Soukeras V., Cappuzzello F., Acosta L., Agodi C., Boiano A., Calabrese S., Carbone D., Cavallaro M., et al.
PHYSICAL REVIEW C, vol.101, no.2, 2020 (SCI-Expanded)
- XVII. **Ne-20 +Ge- 76 elastic and inelastic scattering at 306 MeV**
Spatafora A., Cappuzzello F., Carbone D., Cavallaro M., Lay J. A., Acosta L., Agodi C., Bonanno D., Bongiovanni D., BOZTOSUN İ., et al.
PHYSICAL REVIEW C, vol.100, no.3, 2019 (SCI-Expanded)
- XVIII. **Charge-state distributions of Ne-20 ions emerging from thin foils**
CAVALLARO M., SANTAGATI G., CAPPUZZELLO F., CARBONE D., LINARES R., TORRESI D., ACOSTA L., AGODI C., BONANNO D., BONGIOVANNI D., et al.
RESULTS IN PHYSICS, vol.13, 2019 (SCI-Expanded)
- XIX. **The NUMEN project: NUClear Matrix Elements for Neutrinoless double beta decay**
CAPPUZZELLO F., AGODÌ C., CAVALLARO M., CARBONE D., TUDIŠCO S., Lo Presti D., Oliveira J. R. B., FİNOCCHİARO P., COLONNA M., RİFUGGIATO D., et al.
EUROPEAN PHYSICAL JOURNAL A, vol.54, no.5, 2018 (SCI-Expanded)
- XX. **FIRST MEASUREMENT OF THE Cd-116(Ne-20, O-20)Sn-116 REACTION AT 15 A MeV**
CALABRESE S., CAPPUZZELLO F., CARBONE D., CAVALLARO M., AGODÌ C., ACOSTA L., BONANNO D., BONGIOVANNI D., Borello-Lewin T., BOZTOSUN İ., et al.

Articles Published in Other Journals

- I. **Elastic scattering angular distribution for the 180**
Brischetto G., Sgouros O., Carbone D., Cappuzzello F., Cavallaro M., Lubian J., DE Gregorio G., Agodi C., Calvo D., Lomeli E., et al.
NUOVO CIMENTO C-COLLOQUIA AND COMMUNICATIONS IN PHYSICS, vol.47, no.2, 2024 (ESCI)
- II. **A focus on selected perspectives of the NUMEN project**
Cavallaro M., Agodi C., Bellone J., Brasolin S., Brischetto G., Bussa M., Calabrese S., Calvo D., Campajola L., Capirossi V., et al.
JOURNAL OF PHYSICS: CONFERENCE SERIES, vol.2340, no.1, pp.12036-12045, 2022 (Scopus)
- III. **A Constrained Analysis of the Ca-40(O-18,F-18)K-40 Direct Charge Exchange Reaction Mechanism at 275 MeV**
Cavallaro M., Bellone J. I., Calabrese S., Agodi C., Burrello S., Cappuzzello F., Carbone D., Colonna M., Deshmukh N., Lenske H., et al.
FRONTIERS IN ASTRONOMY AND SPACE SCIENCES, vol.8, 2021 (ESCI)
- IV. **The NUMEN Project @ LNS: Status and perspectives**
Cappuzzello F., Agodi C., Acosta L., Amador-Valenzuela P., Auerbach N., Barea J., Bellone J. I., Belmont D., Bijker R., Bonanno D., et al.
NUOVO CIMENTO C-COLLOQUIA AND COMMUNICATIONS IN PHYSICS, vol.42, 2019 (ESCI)

Refereed Congress / Symposium Publications in Proceedings

- I. **Revisiting the 4He(4He,4He)4He* inelastic scattering at the MAGNEX facility**
Soukeraas V., Cappuzzello F., Agodi C., Becker H., Brischetto G., Calabrese S., Carbone D., Cavallaro M., Chamon L., Ciampi C., et al.
28th International Nuclear Physics Conference, INPC 2022, Cape-Town, South Africa, 11 - 16 September 2022, vol.2586
- II. **Study of the one-neutron transfer reaction in 180 + 76Se collision at 275 MeV in the context of the NUMEN project**
Cirraldo I., Cappuzzello F., Cavallaro M., Carbone D., Burrello S., Spatafora A., Gargano A., De Gregorio G., Magaña Vsevolodovna R., Acosta L., et al.
13th International Spring Seminar on Nuclear Physics: Perspectives and Challenges in Nuclear Structure after 70 Years of Shell Model, ISS 2022, Sant'Angelo, Italy, 15 - 20 May 2022, vol.2453
- III. **New high intensity Heavy - Ion beams @ INFN-LNS: NUMEN project status and perspective**
Agodi C., Cappuzzello F., Acosta L., Amador-Valenzuela P., Auerbach N., Avanzi L., Bellone J., Bijker R., BOZTOSUN İ., Brasolin S., et al.
28th International Nuclear Physics Conference, INPC 2022, Cape-Town, South Africa, 11 - 16 September 2022, vol.2586
- IV. **Multi-channel experimental and theoretical approach to study the 12C(180,18F)12B single charge exchange reaction**
Spatafora A., Carbone D., Cappuzzello F., Cavallaro M., Acosta L., Agodi C., Amador-Valenzuela P., Borello-Lewin T., Brischetto G., Calabrese S., et al.
13th International Spring Seminar on Nuclear Physics: Perspectives and Challenges in Nuclear Structure after 70 Years of Shell Model, ISS 2022, Sant'Angelo, Italy, 15 - 20 May 2022, vol.2453
- V. **Experimental and theoretical multi-channel study of direct nuclear reactions: a tool to provide data driven information on the 76Ge neutrino-less double-beta decay**
Spatafora A., Acosta L., Agodi C., Amador-Valenzuela P., Brischetto G., Calabrese S., Calvo D., Capirossi V., Chávez-

Lomeli E., Cappuzzello F., et al.

28th International Nuclear Physics Conference, INPC 2022, Cape-Town, South Africa, 11 - 16 September 2022, vol.2586

- VI. **A multi-channel study of the $^{20}\text{Ne} + ^{130}\text{Te}$ system within the NUMEN project**
Soukeras V., Acosta L., Agodi C., Boztosun I., Brischetto G., Calvo D., Cappuzzello F., Carbone D., Cavallaro M., Chávez Lomeli E., et al.
44th Symposium on Nuclear Physics, SNP 2023, Cocoyoc, Mexico, 9 - 12 January 2023, vol.2619
- VII. **Recent results on the analysis of the $^{48}\text{Ti}(^{180,20}\text{Ne})^{46}\text{Ca}$ reaction at 275 MeV**
Sgouros O., Cavallaro M., Cappuzzello F., Carbone D., Agodi C., Altana C., Brischetto G., Calabrese S., Calvo D., Capirossi V., et al.
28th International Nuclear Physics Conference, INPC 2022, Cape-Town, South Africa, 11 - 16 September 2022, vol.2586
- VIII. **The NUMEN project: probing nuclear response to weak interaction by nuclear reactions**
Carbone D., Agodi C., Bellone J., Burrello S., Calabrese S., Cappuzzello F., Cavallaro M., Colonna M., De Gregorio G., Ferreira J., et al.
28th International Nuclear Physics Conference, INPC 2022, Cape-Town, South Africa, 11 - 16 September 2022, vol.2586
- IX. **Recent results on heavy-ion direct reactions of interest for $0\nu\beta\beta$ decay at INFN - LNS**
Cavallaro M., Acosta L., Adsley P., Agodi C., Altana C., Amador-Valenzuela P., Auerbach N., Barea J., Bellone J., Bijker R., et al.
43rd Symposium on Nuclear Physics (SNP), Morelos, Mexico, 6 - 09 January 2020, vol.1610
- X. **Recent results on heavy-ion induced reactions of interest for neutrinoless double beta decay at INFN-LNS**
Cavallaro M., Acosta L., Agodi C., Altana C., Amador-Valenzuela P., Auerbach N., Barea J., Bellone J. I., Bijker R., Bonanno D., et al.
4th International Conference on Nuclear Structure and Dynamics (NSD), Venice, Italy, 13 - 17 May 2019, vol.223
- XI. **The NUMEN Project @ LNS: Status and Perspectives**
Cappuzzello F., Agodi C., Acosta L., Amador-Valenzuela P., Auerbach N., Barea J., Bellone J., Belmont D., Bijker R., Bonanno D., et al.
Meeting on Symmetries and Order - Algebraic Methods in Many-Body Systems, Connecticut, United States Of America, 5 - 06 October 2018, vol.2150
- XII. **New Experimental Campaign of NUMEN Project**
Agodi C., Cappuzzello F., Acosta L., Amador-Valenzuela P., Auerbach N., Barea J., Bellone J., Belmont D., Bijker R., Bonanno D., et al.
Meeting on Symmetries and Order - Algebraic Methods in Many-Body Systems, Connecticut, United States Of America, 5 - 06 October 2018, vol.2150
- XIII. **The NUMEN Project @ LNS: Status and Perspectives**
Cappuzzello F., Agodi C., Acosta L., Altana C., Amador-Valenzuela P., Auerbach N., Barea J., Bellone J., Bijker R., Bonanno D., et al.
12th Workshop on Calculation of Double-Beta-Decay Matrix Elements (MEDEX), Prague, Czech Republic, 27 - 31 May 2019, vol.2165
- XIV. **Experimental issues for the measurement of the double charge exchange reactions within the NUMEN project**
CARBONE D., CAPPUZZELLO F., AGODI C., CAVALLARO M., ACOSTA L., BONANNO D., BONGIOVANNI D., Boztosun I., CALABRESE S., CALVO D., et al.
Conference on Neutrino and Nuclear Physics 2017, CNNP 2017, Catania, Italy, 15 - 21 October 2017, vol.1056
- XV. **Data reduction for experimental measurements within the NUMEN project**
Calabrese S., Cappuzzello F., Agodi C., Cavallaro M., Carbone D., Acosta L., Bonanno D., Bongiovanni D., Boztosun I., Calvo D., et al.
Conference on Neutrino and Nuclear Physics 2017, CNNP 2017, Catania, Italy, 15 - 21 October 2017, vol.1056
- XVI. **Experimental challenges for the measurement of the $\text{Cd-116}(\text{Ne-20},\text{O-20})\text{Sn-116}$ double charge**

exchange reaction at 15 AMeV

CARBONE D., CAPPUZZELLO F., AGODÌ C., CAVALLARO M., ACOSTA L., BONANNO D., BONGIOVANNI D., Borello T., BOZTOSUN İ., CALABRESE S., et al.

22nd International School on Nuclear Physics, Neutron Physics and Applications, Varna, Bulgaria, 10 - 16

September 2017, vol.1023

XVII. Measuring nuclear reaction cross sections to extract information on neutrinoless double beta decay

Cavallaro M., Cappuzzello F., Agodi C., Acosta L., Auerbach N., Bellone J., Bijker R., Bonanno D., Bongiovanni D., Borello-Lewin T., et al.

12th International Spring Seminar on Nuclear Physics - Current Problems and Prospects for Nuclear Structure, Italy, 15 - 19 May 2017, vol.966

XVIII. Experimental challenges in the measurement of double charge exchange reactions within the NUMEN project

Carbone D., Cappuzzello F., Agodi C., Cavallaro M., Acosta L., Bonanno D., Bongiovanni D., BOZTOSUN İ., Calabrese S., Calvo D., et al.

41st Symposium on Nuclear Physics (Cocoyoc), Cocoyoc, Mexico, 8 - 11 January 2018, vol.1078

XIX. The nuclear matrix elements of 0v beta beta decay and the NUMEN project at INFN-LNS

Cappuzzello F., Agodi C., Aciksoz E., Acosta L., Aslanoglou X., Auerbach N., Bijker R., Bonanno D., Bongiovanni D., Borello T., et al.

39th Symposium on Nuclear Physics (Cocoyoc), Cocoyoc, Mexico, 5 - 08 January 2016, vol.730

XX. The solution of the Schrödinger equation for the Gauss potential by using the asymptotic iteration method

HACISALİHOĞLU A., KÜÇÜK Y.

101st National Congress of the Italian Physical Society, Roma, Italy, 21 - 25 September 2015

Metrics

Publication: 44

Citation (WoS): 233

Citation (Scopus): 540

H-Index (WoS): 13

H-Index (Scopus): 14