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## International Researcher IDs

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## Education Information

Doctorate, Vanderbilt University, Department Of Physics, United States Of America 1989 - 1995

## Foreign Languages

English

## Dissertations

Doctorate, Monte-Carlo Calculations of Lepton Pair Production in Relativistic Heavy-Ion Collisions, 1995

## Academic Titles / Tasks

Professor, Istanbul Technical University, Fen-Edebiyat Fakültesi, 1996 - Continues

## Academic and Administrative Experience

İstanbul Teknik Üniversitesi, Fen-Edebiyat Fakültesi, 1998 - 2000

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Enhancements of electron-positron pair production at very low transverse momentum in peripheral hadronic  $A + A$  collisions**  
Güçlü M. C., Yılmaz Şengül M.  
PHYSICS LETTERS, SECTION B: NUCLEAR, ELEMENTARY PARTICLE AND HIGH-ENERGY PHYSICS, vol.846, pp.1-5, 2023 (SCI-Expanded)
- II. **Multiple-scattering production of lepton pairs in ultraperipheral heavy-ion collisions**  
Karadağ S., Güçlü M. C.  
PHYSICAL REVIEW C, vol.102, no.1, 2020 (SCI-Expanded)
- III. **Simultaneous production of lepton pairs in ultraperipheral relativistic heavy ion collisions**  
Kurban E., Guclu M. C.  
Physical Review C, vol.96, no.4, 2017 (SCI-Expanded)

- IV. **Electromagnetic heavy-lepton pair production in relativistic heavy-ion collisions**  
Sengul M. Y., Guclu M. C., Mercan O., Karakus N. G.  
European Physical Journal C, vol.76, no.8, 2016 (SCI-Expanded)
- V. **Relativistic antihydrogen production by pair production with positron capture**  
Sengul M. Y., Guclu M. C.  
Progress in Particle and Nuclear Physics, vol.67, no.2, pp.612-615, 2012 (SCI-Expanded)
- VI. **Bound free electron-positron pair production accompanied by giant dipole resonances**  
Sengul M. Y., Guclu M. C.  
Physical Review C - Nuclear Physics, vol.83, no.1, 2011 (SCI-Expanded)
- VII. **Bound-free electron-positron pair production in relativistic heavy-ion collisions**  
Sengul M. Y., Guclu M. C., Fritzsche S.  
Physical Review A - Atomic, Molecular, and Optical Physics, vol.80, no.4, 2009 (SCI-Expanded)
- VIII. **Electromagnetic interactions at RHIC and LHC**  
Guclu M. C.  
PROGRESS IN PARTICLE AND NUCLEAR PHYSICS, VOL 62, NO 2, vol.62, no.2, pp.498-502, 2009 (SCI-Expanded)
- IX. **Production of electron-positron pairs by nuclear dissociation in peripheral heavy ion collisions**  
Guclu M. C., Sengul M. Y.  
PROGRESS IN PARTICLE AND NUCLEAR PHYSICS VOL 59, NO 1, vol.59, no.1, pp.383-385, 2007 (SCI-Expanded)
- X. **Coulomb corrections in the lepton-pair production in ultrarelativistic nuclear collisions**  
Guclu M. C., Kovankaya G., Yilmaz M.  
PHYSICAL REVIEW A, vol.72, no.2, 2005 (SCI-Expanded)
- XI. **Ultra-peripheral collisions of fully stripped gold ions at RHIC energies**  
Guclu M. C.  
Journal of Physics G: Nuclear and Particle Physics, vol.31, no.4, 2005 (SCI-Expanded)
- XII. **Reply to 'Comment on "Higher order effects in lepton-pair production in relativistic heavy ion collisions" '**  
Guclu M. C.  
PHYSICAL REVIEW C, vol.63, no.4, 2001 (SCI-Expanded)
- XIII. **Monte Carlo simulation of e-e+ pair production in Coulomb collisions**  
Güçlü M. C.  
Nuclear Physics A, vol.681, no.1-4, pp.112-115, 2001 (SCI-Expanded)
- XIV. **Monte Carlo simulation of e(-)e(+ ) pair production in Coulomb collisions**  
Guclu M. C.  
NUCLEAR PHYSICS A, vol.681, 2001 (SCI-Expanded)
- XV. **Variation of Cosmic Ray Intensity During the Solar Eclipse August 11 1999**  
KANDEMİR G., GÜÇLÜ M. C., GEÇKİNLİ M., FIRAT C., BOYDAĞ Ş., ÖZGÜÇ A., ATAÇ T.  
ASP Conference Series, vol.205, pp.202-207, 2000 (SCI-Expanded)
- XVI. **Semi-analytic calculations for the impact parameter dependence of electromagnetic multi-lepton pair production**  
Guclu M. C.  
Nuclear Physics A, vol.668, no.1-4, pp.149-159, 2000 (SCI-Expanded)
- XVII. **Higher order effects in lepton-pair production in relativistic heavy ion collisions**  
Güçlü M. C.  
Physical Review C - Nuclear Physics, vol.61, no.5, pp.549031-549034, 2000 (SCI-Expanded)
- XVIII. **Multi-pair production cross sections at ultra-relativistic energies**  
Guclu M. C.  
Nuclear Physics A, vol.661, no.1-4, pp.530-533, 1999 (SCI-Expanded)
- XIX. **Electromagnetic Lepton-Pair Production in Relativistic Heavy-Ion Collisions**  
Guclu M. C., Li J., Umar A., Ernst D., Strayer M.  
Annals of Physics, vol.272, no.1, pp.7-48, 1999 (SCI-Expanded)
- XX. **IMPACT-PARAMETER DEPENDENCE OF MULTIPLE LEPTON-PAIR PRODUCTION FROM**

## **ELECTROMAGNETIC-FIELDS**

Güçlü M. C., WELLS J., UMAR A., STRAYER M., ERNST D.

PHYSICAL REVIEW A, vol.51, no.3, pp.1836-1844, 1995 (SCI-Expanded)

## **XXI. NUCLEAR HARTREE-FOCK CALCULATIONS WITH SPLINES**

UMAR A., STRAYER M., WU J., DEAN D., Güçlü M. C.

PHYSICAL REVIEW C, vol.44, no.6, pp.2512-2521, 1991 (SCI-Expanded)

## **Articles Published in Other Journals**

### **I. Two photon physics in very peripheral collisions of relativistic heavy ions**

Güçlü M. C.

ARI Bulletin of the Istanbul Technical University, vol.54, no.3, pp.44-47, 2005 (Scopus)

## **Books & Book Chapters**

### **I. Structure and Dynamics of Elementary Matter**

Greiner W. (Editor), Itkis M. G. (Editor), Reinhardt J. (Editor), Güçlü M. C. (Editor)

Kluwer Academic Publishers, Dordrecht, 2004

## **Refereed Congress / Symposium Publications in Proceedings**

### **I. Electromagnetic interactions of heavy ions at small impact parameters and lepton pair productions**

Güçlü M. C., Sengul M. Y.

27th Winter Workshop on Nuclear Dynamics (WWND), Colorado, United States Of America, 6 - 13 February 2011, vol.316

### **II. Lepton pair production accompanied by giant dipole resonance**

Gueclue M. C.

International Workshop on High-Energy Photon Collision at the LHC, Geneva, Switzerland, 22 - 28 April 2008, vol.179-80, pp.134-141

### **III. Electron positron pair production at RHIC and LHC**

Guclu M. C.

Conference on Nuclear Physic and Astrophysics - From Stable Beams to Exotic Nucle, Cappadocia, Turkey, 25 - 30 June 2008, vol.1072, pp.15-20

### **IV. Atomic collisions and free lepton pair production**

Güçlü M. C., Yilmaz M.

LOW ENERGY ANTIPROTON PHYSICS: 8th International Conference on Low Energy Antiproton Physics, LEAP'05, Bonn, Germany, 16 - 22 May 2005, vol.796, pp.334-337

### **V. Atomic collisions and free lepton pair production**

Guclu M. C., Yilmaz M.

8th International Conference on Low Energy Antiproton Physics (LEAP 2005), Bonn, Germany, 16 - 22 May 2005, vol.796, pp.334-337

## **Supported Projects**

Güçlü M. C., Project Supported by Higher Education Institutions, Lepton Pair Production at Ultra Relativistic Heavy Ion Collisions, 2012 - 2018

Güçlü M. C., Project Supported by Higher Education Institutions, BOUND FREE ELECTRON PSİTRON PAİR PRODUCTION, 2011 - 2018

Güçlü M. C., Project Supported by Higher Education Institutions, Lepton Pair Production Accompanied by Giant Dipole Resonance, 2008 - 2018

Güçlü M. C., Project Supported by Higher Education Institutions, Lepton Çift Üretiminde Columb Düzeltmesi, 2005 - 2018

Güçlü M. C., Project Supported by Higher Education Institutions, Relavistik Ağır İyon Çarpışmalarında elektron Yakalanması, 2004 - 2018

Güçlü M. C., Project Supported by Higher Education Institutions, Ağır İyon Çarpışmalarında Parçacık Üretimi, 2006 - 2008

Güçlü M. C., Project Supported by Higher Education Institutions, Relativistik Ağır İyon Çarpışmasında Lepton Çift Oluşumu, 1998 - 2005

## **Metrics**

Publication: 29

Citation (WoS): 168

Citation (Scopus): 161

H-Index (WoS): 7

H-Index (Scopus): 6