

# Prof. Yaşar Gürkan ÇELEBİ

## Personal Information

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**Web:** <http://scholar.google.com.tr/citations?user=3ypoiNUAAAAJ>

## International Researcher IDs

ORCID: 0000-0003-1849-1197

Publons / Web Of Science ResearcherID: F-5929-2011

ScopusID: 6603296573

Yoksis Researcher ID: 200900

## Education Information

Post Doctorate, Texas Tech University, Fizik, United States Of America 1998 - 1999

Doctorate, Texas Tech University, Fizik, United States Of America 1995 - 1998

Postgraduate, Texas Tech University, Fizik, United States Of America 1992 - 1994

Undergraduate, Istanbul University, Fizik, Turkey 1984 - 1989

## Foreign Languages

English, C1 Advanced

## Dissertations

Doctorate, COPPER DIFFUSION IN SILICON , Texas Tech University, Faculty of Science, Fizik, 1998

Postgraduate, Electric Field Assisted Diffusion in Silicon, Texas Tech University, Faculty of Science, Fizik, 1994

## Research Areas

Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Transport Phenomena in Condensed Matter, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Electronic structure of bulk material, Magnetic Properties and Materials, Electron and Ion Emission by Liquids and Solids, Magnetic Resonances and Relaxation, Natural Sciences

## Academic Titles / Tasks

Professor, Istanbul University, Faculty of Science, Department of Physics, 2012 - Continues

Professor, Texas Tech University, Faculty of Science, Fizik, 2013 - 2013

Associate Professor, Istanbul University, Faculty of Science, Department of Physics, 2006 - 2012

Associate Professor, Texas Tech University, Seyahat, Turizm Ve Eğlence Hizmetleri, Fizik, 2010 - 2011

Assistant Professor, Istanbul University, Faculty of Science, Department of Physics, 2000 - 2006

Instructor, Istanbul University, Faculty of Science, Department of Physics, 1999 - 2000

Research Assistant, Texas Tech University, Seyahat, Turizm Ve Eğlence Hizmetleri, Fizik, 1995 - 1998

Research Assistant, Istanbul University, Faculty of Science, Department of Physics, 1990 - 1990

## Academic and Administrative Experience

Head of Department, Istanbul University, Faculty Of Science, Fizik, 2012 - 2013

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

- I. **Characterization of a GaAs/GaAsBi pin solar cell**  
Muhammetgulyyev A., Erbas Ö. G., Kinaci B., Donmez Ö., Celebi Y. G., Erol A.  
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.34, no.8, 2019 (SCI-Expanded)
- II. **Spectroscopic identification of shallow muonium acceptors in Si<sub>0.06</sub>Ge<sub>0.94</sub>**  
Carroll B. R., Lichti R. L., Mengyan P. W., Baker B. B., Celebi Y. G., King P. J. C., Chow K. H., Yonenaga I.  
Applied Physics Letters, vol.105, no.12, 2014 (SCI-Expanded)
- III. **The first 25 years of semiconductor muonics at ISIS, modelling the electrical activity of hydrogen in inorganic semiconductors and high- $\kappa$  dielectrics**  
Cox S. F. J., Lichti R. L., Lord J. S., Davis E. A., Vilao R. C., Gil J. M., Veal T. D., Celebi Y. G.  
Physica Scripta, vol.88, no.6, 2013 (SCI-Expanded)
- IV. **Muonium dynamics in transparent conducting oxides**  
Celebi Y. G., Lichti R. L., Baker B. B., Mengyan P. W., Bani-Salameh H. N., Catak E.  
PHYSICA B-CONDENSED MATTER, vol.407, no.15, pp.2879-2882, 2012 (SCI-Expanded)
- V. **Motion of positively charged muonium in ZnO**  
Baker B. B., Lichti R. L., Celebi Y. G., Mengyan P. W., Bani-Salameh H. N.  
PHYSICA B-CONDENSED MATTER, vol.407, no.15, pp.2864-2866, 2012 (SCI-Expanded)
- VI. **Muonium transitions in Ge-rich SiGe alloys**  
Mengyan P. W., Lichti R. L., Celebi Y. G., Carroll B. R., Baker B. B., Bani-Salameh H. N., Yonenaga I.  
PHYSICA B-CONDENSED MATTER, vol.407, no.15, pp.2829-2832, 2012 (SCI-Expanded)
- VII. **Muonium defect levels in Czochralski-grown silicon-germanium alloys**  
Carroll B. R., Lichti R. L., King P. J. C., Celebi Y. G., Yonenaga I., Chow K. H.  
PHYSICAL REVIEW B, vol.82, no.20, 2010 (SCI-Expanded)
- VIII. **Evidence for a shallow muonium acceptor state in Ge-rich Cz-Si<sub>1-x</sub>Ge<sub>x</sub>**  
Carroll B. R., Lichti R. L., Celebi Y. G., Chow K. H., King P. J. C., Yonenaga I.  
PHYSICA B-CONDENSED MATTER, vol.404, pp.5113-5116, 2009 (SCI-Expanded)
- IX. **Hyperfine spectroscopy and characterization of muonium in ZnGeP<sub>2</sub>**  
Mengyan P. W., Baker B. B., Lichti R. L., Chow K. H., Celebi Y. G., Zawilski K. T., Schunemann P. C.  
PHYSICA B-CONDENSED MATTER, vol.404, pp.5121-5124, 2009 (SCI-Expanded)
- X. **Muonium in 4H silicon carbide**  
Celebi Y. G., Lichti R. L., Carroll B. R., King P. J. C., Cox S. F. J.  
PHYSICA B-CONDENSED MATTER, vol.404, pp.5117-5120, 2009 (SCI-Expanded)
- XI. **Shallow donor state of hydrogen in In<sub>2</sub>O<sub>3</sub> and SnO<sub>2</sub>: Implications for conductivity in transparent conducting oxides**  
King P. D. C., Lichti R. L., Celebi Y. G., Gil J. M., Vilao R. C., Alberto H. V., Duarte J. P., Payne D. J., Egdel R. G., McKenzie  
, et al.  
PHYSICAL REVIEW B, vol.80, no.8, 2009 (SCI-Expanded)
- XII. **Muonium transitions in 4H silicon carbide**  
Celebi Y. G., Lichti R. L., Bani-Salameh H. N., Meyer A. G., Carroll B. R., Vernon J. E., King P. J. C., Cox S. F. J.  
Physica B: Condensed Matter, vol.404, pp.845-848, 2009 (SCI-Expanded)

- XIII. **Diamagnetic states in germanium studied by the photo-excited TF-mu SR measurements**  
Fan I, Chow K. H., Hitti B., Mansour A. I., Scheuermann ., MacFarlane W. A., Schultz B. E., Egilmez M., Jung J., Celebi Y. G., et al.  
PHYSICA B-CONDENSED MATTER, vol.404, pp.849-851, 2009 (SCI-Expanded)
- XIV. **Dynamics of T-site muonium states in gallium phosphide**  
Vernon J. E., Carroll B. R., Bani-Salameh H. N., Lichti R. L., Celebi Y. G., Fan I., Mansour A. I., Chow K. H.  
PHYSICA B-CONDENSED MATTER, vol.404, pp.820-823, 2009 (SCI-Expanded)
- XV. **Muonium acceptor states in high GeSi<sub>1-x</sub>Gex alloys**  
Carroll B. R., Lichti R. L., King P. J. C., Celebi Y. G., Yonenaga I., Chow K. H.  
PHYSICA B-CONDENSED MATTER, vol.404, pp.812-815, 2009 (SCI-Expanded)
- XVI. **The donor nature of muonium in undoped, heavily n-type and p-type InAs**  
King P. D. C., Veal T. D., McConville C. F., King P. J. C., Cox S. F. J., Celebi Y. G., Lichti R. L.  
Journal of Physics Condensed Matter, vol.21, no.7, 2009 (SCI-Expanded)
- XVII. **Muonium transitions in 4H silicon carbide**  
ÇELEBİ Y. G., Lichti R. L., Bani-Salameh H. N., Carroll B. R., Meyer ., Vernon J. E., King P. J. C., Cox S. F. J.  
PHYSICA B-CONDENSED MATTER, no.404, 2009 (SCI-Expanded)
- XVIII. **The donor nature of muonium in undoped, heavily n-type and p-type InAs**  
King P. D. C., Veal T. D., McConville C. F., King P. J. C., Cox S. F. J., ÇELEBİ Y. G., Lichti R. L.  
JOURNAL OF PHYSICS-CONDENSED MATTER, no.21, 2009 (SCI-Expanded)
- XIX. **Influence of photoexcitation on the diamagnetic muonium states in Ge studied via their precession signatures**  
Fan I, Chow K. H., Hitti B., Scheuermann R., Mansour A. I., MacFarlane W. A., Schultz B. E., Egilmez M., Jung J., Celebi Y. G., et al.  
PHYSICAL REVIEW B, vol.78, no.15, 2008 (SCI-Expanded)
- XX. **Muonium defect states and ionization energies in SiGe alloys**  
King P. J. C., Lichti R. L., Carroll B. R., Celebi Y. G., Chow K. H., Yonenaga I.  
PHYSICA B-CONDENSED MATTER, vol.401, pp.617-620, 2007 (SCI-Expanded)
- XXI. **Diffusion and trapping of positively charged muonium in InAs**  
Lichti R. L., Vernon J. E., Carroll B. R., Celebi Y. G., King P. J. C., Cox S. F. J.  
PHYSICA B-CONDENSED MATTER, vol.401, pp.627-630, 2007 (SCI-Expanded)
- XXII. **Charge-state transitions of muonium in 6H silicon carbide**  
Bani-Salameh H. N., Meyer A. G., Carroll B. R., Lichti R. L., Celebi Y. G., Chow K. H., King P. J. C., Cox S. F. J.  
PHYSICA B-CONDENSED MATTER, vol.401, pp.631-634, 2007 (SCI-Expanded)
- XXIII. **Dynamics of positively charged muonium centers in indium nitride**  
Celebi Y. G., Lichti R. L., Coss B. E., Cox S. F. J.  
PHYSICAL REVIEW B, vol.74, no.24, 2006 (SCI-Expanded)
- XXIV. **Diffusion and conversion dynamics for neutral muonium in aluminum nitride**  
Bani-Salameh H. N., Lichti R. L., Celebi Y. G., Cox S. F. J.  
PHYSICAL REVIEW B, vol.74, no.24, 2006 (SCI-Expanded)
- XXV. **Anisotropic muonium centers in aluminum nitride**  
Bani-Salameh H. N., ÇELEBİ Y. G., Cox S. F. J., Lichti R. L.  
PHYSICA B-CONDENSED MATTER, vol.374, pp.372-375, 2006 (SCI-Expanded)
- XXVI. **Muonium states and dynamics in 4H and 6H silicon carbide**  
Bani-Salameh H. N., ÇELEBİ Y. G., Chow K. H., Coss B., Cox S., Lichti R.  
PHYSICA B-CONDENSED MATTER, vol.374, pp.368-371, 2006 (SCI-Expanded)
- XXVII. **dc conduction properties of TlSbSe<sub>2</sub> crystals**  
Kalkan N., Yildirim S., Deger D., Ulutas K., Celebi Y.  
MATERIALS RESEARCH BULLETIN, vol.40, no.6, pp.936-941, 2005 (SCI-Expanded)
- XXVIII. **Diffusion and trapping of Mu in the III-V nitrides**  
Lichti R., Celebi Y. G., Cottrell S., Cox S., Davis E.  
Journal of Physics Condensed Matter, vol.16, no.40, 2004 (SCI-Expanded)

- XXIX. **Diffusion and trapping of Mu in the III–V nitrides**  
Lichti R. L., ÇELEBİ Y. G., Cottrell S. P., Cox S. F. J., Davis E. A.  
JOURNAL OF PHYSICS-CONDENSED MATTER, no.16, pp.4721-4738, 2004 (SCI-Expanded)
- XXX. **Location of the hydrogen donor in InN: Evidence from muonium results**  
Lichti R., Celebi Y. G., Cox S., Davis E.  
Journal of Physics Condensed Matter, vol.16, no.3, pp.325-331, 2004 (SCI-Expanded)
- XXXI. **Location of the hydrogen donor in InN: evidence from muonium results**  
Lichti R. L., ÇELEBİ Y. G., Cox S. F. J., Davis E. A.  
JOURNAL OF PHYSICS-CONDENSED MATTER, no.16, pp.325-331, 2004 (SCI-Expanded)
- XXXII. **Muonium (hydrogen) defect centers in indium nitride**  
ÇELEBİ Y. G., Davis E. A., Lichti R. L., Cox S. F. J.  
PHYSICA B-CONDENSED MATTER, no.340, 2003 (SCI-Expanded)
- XXXIII. **Trapping of mobile Mu centers in single crystal AlN**  
Lichti R. L., ÇELEBİ Y. G., Chow K. H., Hitti ., Cox S. F. J.  
PHYSICA B-CONDENSED MATTER, no.340, pp.430-433, 2003 (SCI-Expanded)
- XXXIV. **Trapping of mobile Mu centers in single crystal AlN**  
Lichti R., Celebi Y. G., Chow K., Hitti B., Cox S.  
PHYSICA B-CONDENSED MATTER, vol.340, pp.430-433, 2003 (SCI-Expanded)
- XXXV. **The electrical activity of hydrogen and muonium in silicon at high temperatures**  
Celebi Y. G., Cox S., Davis E., Lichti R.  
PHYSICA B-CONDENSED MATTER, vol.340, pp.641-645, 2003 (SCI-Expanded)
- XXXVI. **Muonium–acceptor interactions in gallium phosphide**  
Lichti R. L., Chow K. H., Davis E. A., Hitti ., ÇELEBİ Y. G., Cox S. F. J.  
PHYSICA B-CONDENSED MATTER, no.326, pp.167-170, 2003 (SCI-Expanded)
- XXXVII. **Muonium-acceptor interactions in gallium phosphide**  
Lichti R., Chow K., Davis E., Hitti B., Celebi Y. G., Cox S.  
Physica B: Condensed Matter, vol.326, pp.167-170, 2003 (SCI-Expanded)
- XXXVIII. **Shallow donor states of hydrogen in II–VI oxide and chalcogenide semiconductors, modelled by muon spectroscopy**  
Cox S., Cottrell S., King P., Lord J., Alberto H., de Campos N., Gil J., Duarte J., Vilao R., Davis E., et al.  
PHYSICS OF SEMICONDUCTORS 2002, PROCEEDINGS, vol.171, pp.69-75, 2003 (SCI-Expanded)
- XXXIX. **The CERN Axion Solar Telescope (CAST)**  
Aalseth C., Arik E., Autiero D., Avignone F., Barth K., Bowyer S., Brauninger H., Brodzinski R., Carmona J., Cebrian S., et al.  
NUCLEAR PHYSICS B-PROCEEDINGS SUPPLEMENTS, vol.110, pp.85-87, 2002 (SCI-Expanded)
- XL. **Electrical properties of fluorinated amorphous carbon films**  
Biswas N., Harris H., Wang X., Celebi G., Temkin H., Gangopadhyay S.  
JOURNAL OF APPLIED PHYSICS, vol.89, no.8, pp.4417-4421, 2001 (SCI-Expanded)
- XLI. **Fouling of heat-transfer surfaces in oil-fired boilers for domestic heating**  
Butcher T., Lee S., ÇELEBİ Y. G., Litzke W.  
JOURNAL OF THE INSTITUTE OF ENERGY, vol.70, no.485, pp.151-159, 1997 (SCI-Expanded)

## Refereed Congress / Symposium Publications in Proceedings

- I. **A Comparison Of Characteristics of Heterojunction pin Solar Cells Based On Dilute Bismide And Dilute Nitride Alloys**  
Muhammedgulyev A., SARCAN F., Göksel Ö., KINACI B., DÖNMEZ Ö., ÇELEBİ Y. G., EROL A.  
International Conference On Condensed Matter And Materials science, Adana, Turkey, 11 - 15 October 2017, pp.25
- II. **Transition dynamics for Mu acceptor states in Si 1-x Ge x alloys**  
Jayarathna G., Lichti R. L., Mengyan P. W., Celebi Y. G., Baker B. B., Carroll B. R., Yonenaga I.

2014 IEEE International Conference on Automation Science and Engineering, CASE 2014, Taipei, Taiwan, 18 - 22 August 2014, vol.1583, pp.56-59

- III. **Magnetic fields and fluctuations in weakly Mn doped ZnGeP<sub>2</sub>**  
Mengyan P. W., Lichti R. L., Celebi Y. G., Baker B. B., Carroll B. R., Catak E., Zawilski K. T., Schunemann P. G.  
2014 IEEE International Conference on Automation Science and Engineering, CASE 2014, Taipei, Taiwan, 18 - 22 August 2014, vol.1583, pp.190-194
- IV. **Motional characteristics of positively charged muonium defects in In<sub>2</sub>O<sub>3</sub>**  
Baker B. B., Celebi Y. G., Lichti R. L., Mengyan P. W., Catak E.  
2014 IEEE International Conference on Automation Science and Engineering, CASE 2014, Taipei, Taiwan, 18 - 22 August 2014, vol.1583, pp.323-326
- V. **Initial Study of Positively Charged Muonium Motion in ZnO, CdO, TiO<sub>2</sub>, and SnO<sub>2</sub>**  
Baker B. B., Celebi Y. G., Lichti R. L., Bani-Salameh H. N., Mengyan P. W., Carroll B. R.  
12th International Conference on Muon Spin Rotation, Relaxation and Resonance (muSR), Cancun, Mexico, 16 - 20 May 2011, vol.30, pp.101-104
- VI. **Longitudinal Muon Spin Depolarization in Ge-Rich SiGe Alloys**  
Mengyan P. W., Celebi Y. G., Lichti R. L., Carroll B. R., Baker B. B., Bani-Salameh H. N., Yonenaga I.  
12th International Conference on Muon Spin Rotation, Relaxation and Resonance (muSR), Cancun, Mexico, 16 - 20 May 2011, vol.30, pp.214-218
- VII. **Motion of Mu(+) in Transparent Conducting Oxides**  
Celebi Y. G., Lichti R. L., Baker B. B., Mengyan P. W., Bani-Salameh H. N.  
12th International Conference on Muon Spin Rotation, Relaxation and Resonance (muSR), Cancun, Mexico, 16 - 20 May 2011, vol.30, pp.206-209
- VIII. **Structural properties of In-In<sub>2</sub>O<sub>3</sub> composite films”, “11th Europhysical conference on defect in insulating materials**  
Ulutaş H. K., Değer D., Kalkan N., Yıldırım S., Çelebi Y. G., Skarlatos Y., Öveçoğlu L., Genç A.  
11th Europhysical conference on defect in insulating materials, Pecs, Hungary, 1 - 04 July 2010, pp.122
- IX. **Structural properties of In-In<sub>2</sub>O<sub>3</sub> composite films**  
Ulutaş K., Deger D., Kalkan N., Yildirim S., Celebi Y. G., Iskarlatos Y., Öveçoğlu M. L., Genc A.  
11th Europhysical Conference on Defects in Insulating Materials (EURODIM), Pecs, Hungary, 12 - 16 July 2010, vol.15
- X. **TlSbSe<sub>2</sub> ve TlSbS<sub>2</sub> ince filmlerinde dielektriksel özellikler ve iletkenlik**  
Yıldırım S., Kalkan N., Ulutaş H. K., Değer D., Çelebi Y. G.  
Türk Fizik Derneği 24. Uluslararası Fizik Kongresi, Malatya, Turkey, 1 - 04 September 2007, vol.24, pp.146
- XI. **TlSbSe<sub>2</sub> Kristallerinde, İnce Filmlerinde İletkenlik ve Dielektriksel Özellikler**  
Yıldırım S., Kalkan N., Ulutaş H. K., Ulutaş D., Çelebi Y. G.  
24th International Physics Congress, Malatya, Turkey, 1 - 04 August 2007, pp.3-48
- XII. **Motion of Muonium (Hydrogen) in the III-V Nitrides**  
ÇELEBİ Y. G.  
PHYSICS OF SEMICONDUCTORS: 27th International Conference on the Physics of Semiconductors - ICPS-27 Date: 26-30 July 2004 Location: Flagstaff, Arizona (USA), United States Of America, 1 - 04 January 2005, no.772, pp.255-256
- XIII. **Motion of muonium (hydrogen) in the III-V nitrides**  
Lichti R., ÇELEBİ Y. G., Cox S., Davis E.  
27th International Conference on the Physics of Semiconductors (ICPS-27), Arizona, United States Of America, 26 - 30 July 2004, vol.772, pp.255-256
- XIV. **Shallow donor states of hydrogen in II-VI oxide and chalcogenide semiconductors, modelled by muon spectroscopy**  
ÇELEBİ Y. G.  
Proceedings of the 26th International Conference on the Physics of Semiconductors Held in Edinburgh, UK, 29 July-2 August 2002, United Kingdom, 1 - 04 September 2003, pp.69-75

## Supported Projects

ÇELEBİ Y. G., Other International Funding Programs, MuSR in SiC, 2004 - 2006

## Metrics

Publication: 55

Citation (WoS): 344

Citation (Scopus): 307

H-Index (WoS): 8

H-Index (Scopus): 8

## Congress and Symposium Activities

Gordon Research Conference, Defects in Semiconductors August 8-13, 2010 Colby-Sawyer College New London, NH, Attendee, New London, United States Of America, 2010

The 25th International Conference on Defects in Semiconductors (ICDS-25) July 20-24, 2009 in St. Petersburg, Russia,, Attendee, St. Petersburg, Russia, 2009

The 11th International Conference on Muon Spin Rotation, Relaxation and Resonance, Tsukuba, Japan, 21-25th July 2008, Attendee, Tsukuba, Japan, 2008

24th International Conference on Defects in Semiconductors 22-27 July 2007 Albuquerque, New Mexico USA, Attendee, Albuquerque, United States Of America, 2007

## Scholarships

West Texas Turkish American Association Scholarship, Official Institutions of Foreign Countries, 1993 - Continues

Yurt Disi Master/Doktora Bursu, Ministry of Education, 1990 - Continues

## Non Academic Experience

İstanbul Üniversitesi

Texas Tech Üniversitesi

İstanbul Üniversitesi

İstanbul Üniversitesi

Texas Tech Üniversitesi

Texas Tech Üniversitesi

İstanbul Üniversitesi