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Education Information

Doctorate, Case Western Reserve University, Physics, United States Of America 1988 - 1994

Postgraduate, University of Wisconsin-Madison, Physics, United States Of America 1987 - 1988

Undergraduate, Istanbul University, Turkey 1979 - 1983

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Statistical Thermodynamics of Chain Molecular Fluids: Equation of State Parameters for PVT Scaling and Their Group Contributions., Case Western Reserve University, Physics, 1994

Postgraduate, The Mass Spectra of Pure Methane and Nitrogen-methane Plasmas for Diamondlike Carbon Films., University of Wisconsin-Madison, Physics, 1988

Research Areas

Thermal Properties of Condensed Matter, Surfaces, Interfaces, Thin Films and Nanosystems, Statistical Mechanics, Characterization of Polymers, Polymeric Materials, Thermodynamics, Fuel Cells

Academic Titles / Tasks

Professor, Marmara University, Faculty of Arts and Sciences, Physics, 2003 - Continues

Associate Professor, Marmara University, Faculty of Arts and Sciences, Physics, 1998 - 2003

Assistant Professor, Marmara University, Faculty of Arts and Sciences, Physics, 1996 - 1998

Research Assistant, Istanbul Technical University, 1985 - 1986

Research Assistant, Istanbul Technical University, Fizik Mühendisliği Bölümü, 1984 - 1985

Academic and Administrative Experience

Head of Department, Marmara University, Faculty of Arts and Sciences, Physics, 2008 - Continues
Director of The Institution, Marmara University, Institute for Graduate Studies in Pure and Applied Sciences, 2014 - 2017
Head of Department, Marmara University, Faculty of Arts and Sciences, Physics, 2008 - 2017
Assistant Director of the Institute, Marmara University, Institute for Graduate Studies in Pure and Applied Sciences, 2006 - 2008
Deputy Head of Department, Marmara University, Faculty of Arts and Sciences, Physics, 1999 - 2002

Advising Theses

YUMAK YAŞI A., YAŞI U., Pozitron annihilasyon ömür spektroskopisi kullanılarak pamam dendrimerlerinin serbest hacim incelemesi, Postgraduate, H.Kılıç(Student), 2019
YAŞI U., TAV C., Statistical thermodynamics of macromolecular system in terms of simha-somcynsky theory in conjunction with lattice cluster theory = Örgü küme teorisiyle birleşimli simha somcynsky teorisinden makromoleküler sistemlerin istatistiksel termodinamiği, Postgraduate, A.Awati(Student), 2019
TAV C., YAŞI U., Katkılandırılmış PNN-PZT piezoelektrik seramiklerin pozitron yokolma (PALS) tekniğiyle incelenmesi, Postgraduate, F.Çetin(Student), 2019
TAV C., YAŞI U., Automated data acquisition and analysis system for positron annihilation spectroscopy, Postgraduate, M.Adil(Student), 2019
YAŞI U., TAV C., Simha-somcynsky ve Cahn Hillard kuramlarını kullanarak polimerlerin yüzey serbest hacim derinlik profilinin çıkarılması, Doctorate, S.Küzeci(Student), 2011
YAŞI U., YaşI U., Monte Carlo simülasyonu ile ising modeli ve faz geçişleri, Postgraduate, Ö.Aşçı(Student), 2011
YAŞI U., Dallanmış ve dendrimer makromoleküler yapıların istatistik termodinamiği, Doctorate, M.Aslan(Student), 2009
YAŞI U., Polimer-iyonik tuz elektrolitlerinin iletkenlik-serbest hacim ilişkilerinin pozitron yokolma ömür spektroskopisi ile incelenmesi, Postgraduate, B.Coşkun(Student), 2009
YAŞI U., Eriyik polimerin viskoz davranışının serbest hacim ile ilişkilendirilmesi, Postgraduate, G.Akdeniz(Student), 2006
YAŞI U., Zincir moleküler sıvıların yüzey geriliminin bulk özellikleri ile ilişkilendirilmesi, Postgraduate, C.Boyrac(Student), 2004
YAŞI U., Bazı hidrokarbon karışımlarının viskoz davranışının denge ve transport kuramları ile ilişkilendirilmesi, Postgraduate, F.Şahin(Student), 2002
YAŞI U., Hidrokarbon sıvıların istatistik termodinamiği: ultrasonik ses hızının termodinamik niceliklerle ilişkilendirilmesi, Postgraduate, A.Sayıcı(Student), 2002
YAŞI U., Hirdokarbon sıvıların istatistik termodinamiği: izotermal ve izentropik sıkıştırılabilirliğin serbet hacim metodu ile incelenmesi, Postgraduate, S.Aydın(Student), 2002
YAŞI U., Hidrokarbon molekül sıvıların istatistik termodinamiği:Karakteristik grub katkıları kullanılarak fiziksel ve kimyasal karışımların incelenmesi, Postgraduate, S.Küzeci(Student), 1999
YAŞI U., Polimer sıvıların P-V-T ve viskoz davranışlarının ilişkilendirilmesi, Postgraduate, E.Usanmaz(Student), 1999

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Role of free volume in mechanical behaviors of side chain lcp grafted products of high density polyethylene**
Sen B. O. , ÇETİN S., YAŞI U., Soykan U.
JOURNAL OF POLYMER RESEARCH, vol.28, no.8, 2021 (Journal Indexed in SCI)
- II. **Free volume, thermal and morphological properties of photo-crosslinked thiol-Ene/nanodiamond hybrid network**
Cigil A. B. , MADAKBAŞ S., TAV C., YAŞI U., KAHRAMAN M. V.
PIGMENT & RESIN TECHNOLOGY, vol.50, no.2, pp.113-120, 2021 (Journal Indexed in SCI)
- III. **Optical and photoluminescence spectroscopy analysis and Doppler broadening annihilation**

radiation studies of perovskites based on La_{1-x}Ni_xMnO_{2.75} thin layers

Arrar A., Benhaliliba M., Boukhachem A., YAHSI U., TAV C., Yumak A., Amlouk M.
OPTIK, vol.224, 2020 (Journal Indexed in SCI)

- IV. **A detailed survey for determination of the grafted semifluorinated acrylic compound effect on thermal, microstructural, free volume, mechanical and morphological features of HDPE**
Soykan U., Sen B. O. , Cetin S., YAHSI U., TAV C.
JOURNAL OF FLUORINE CHEMISTRY, vol.233, 2020 (Journal Indexed in SCI)
- V. **Structural and dielectrical properties of PMMA/TiO₂ composites in terms of free volume defects probed by positron annihilation lifetime spectroscopy**
KAYA A. U. , Kösem G., YENER M. D. , TAV C., YAHSI U., ESMER K.
Polymers and Polymer Composites, 2020 (Journal Indexed in SCI Expanded)
- VI. **Effects of boron nitrite in thermoplastic polyurethane on thermal, electrical and free volume properties**
DUMLUĐAĞ F., Yener M. Y. , BAŞTÜRK E., MADAKBAŞ S., KAHRAMAN M. V. , Umer M. A. , YAHSI U., TAV C.
POLYMER BULLETIN, vol.76, no.8, pp.4087-4101, 2019 (Journal Indexed in SCI)
- VII. **Ionic conductivity of PVdF-co-HFP/LiClO₄ in terms of free volume defects probed by positron annihilation lifetime spectroscopy**
YAHSI U., DELİGÖZ H., TAV C., Ulutas K., Deger D., YILMAZTÜRK S., ERDEMCİ G., ÇOŞKUN B., YILMAZOĞLU M., YAKUT Ş.
RADIATION EFFECTS AND DEFECTS IN SOLIDS, vol.174, pp.214-228, 2019 (Journal Indexed in SCI)
- VIII. **Interrelationships of Pressure-Dependent Hole Fraction and Elongational Viscosity in Polymer Melts**
Sahin-Dinc F., YAHSI U., SEDLACEK T.
ADVANCES IN POLYMER TECHNOLOGY, 2019 (Journal Indexed in SCI)
- IX. **Dielectric properties and conductivity of PVdF-co-HFP/LiClO₄ polymer electrolytes**
Ulutas K., YAHSI U., Deligoz H., TAV C., Yilmazturk S., Yilmazoglu M., Erdemci G., Coskun B., Yakut S., Deger D.
CANADIAN JOURNAL OF PHYSICS, vol.96, no.7, pp.786-791, 2018 (Journal Indexed in SCI)
- X. **Europium doping-induced stability and quantum confinement effect in ZnO quantum well wires QWW: Electronic structure calculation and material structural investigation in terms of band-gap shift**
Yumak A., Yahsi U., Petkova P., Boubaker K.
MATERIALS LETTERS, vol.164, pp.89-92, 2016 (Journal Indexed in SCI)
- XI. **The Effect of Hole Fraction on Viscosity in Atactic and Syndiotactic Polystyrenes**
Sahin-Dinc F., Sorrentino A., TAV C., YAHSI U.
INTERNATIONAL JOURNAL OF THERMOPHYSICS, vol.36, pp.3239-3254, 2015 (Journal Indexed in SCI)
- XII. **Molecular structure stability of short-chain chlorinated paraffins (SCCPs): Evidence from lattice compatibility and Simha-Somcynsky theories**
Yumak A., Boubaker K., Petkova P., Yahsi U.
JOURNAL OF MOLECULAR STRUCTURE, vol.1098, pp.255-260, 2015 (Journal Indexed in SCI)
- XIII. **Relaxation time of polypropylene glycol and polypropylene glycol dimethylether-like polymers in terms of fluid-phase temperature and pressure dependent hole fraction**
YAHSI U., Coskun B., YUMAK YAHSI A., Boubaker K., TAV C.
EUROPEAN POLYMER JOURNAL, vol.68, pp.226-232, 2015 (Journal Indexed in SCI)
- XIV. **Thermal and size effect on the R lines luminescence in YAG:Cr³⁺**
Erdem M., Ozen G., YAHSI U., Di Bartolo B.
JOURNAL OF LUMINESCENCE, vol.158, pp.464-468, 2015 (Journal Indexed in SCI)
- XV. **On the Non-Newtonian Viscous Behavior of Polymer Melts in Terms of Temperature and Pressure-Dependent Hole Fraction**
Dinc F. S. , Sedlacek T., TAV C., YAHSI U.
JOURNAL OF APPLIED POLYMER SCIENCE, vol.131, no.15, 2014 (Journal Indexed in SCI)
- XVI. **Viscous Behavior of PS, PP, and ABS in Terms of Temperature and Pressure-Dependent Hole Fraction**

- Akdeniz G., YAŞI U., TAV C.
JOURNAL OF APPLIED POLYMER SCIENCE, vol.117, no.1, pp.110-113, 2010 (Journal Indexed in SCI)
- XVII. **The magnetic field dependency of hydrogenic impurity binding energy under inverse lateral parabolic potential**
ELAGÖZ S., BAŞER P., YAŞI U.
PHYSICA B-CONDENSED MATTER, vol.403, pp.3879-3882, 2008 (Journal Indexed in SCI)
- XVIII. **On the Ionic Conductivity of Polymer Electrolytes in Terms of Hole Fraction**
YAŞI U., Ulutas K., TAV C., Deger D.
JOURNAL OF POLYMER SCIENCE PART B-POLYMER PHYSICS, vol.46, no.20, pp.2249-2254, 2008 (Journal Indexed in SCI)
- XIX. **Linking the viscous and vacancy behavior of mixtures of high-molecular-weight hydrocarbons**
Sahin F., Tav C., Yahsi U.
INTERNATIONAL JOURNAL OF THERMOPHYSICS, vol.27, no.5, pp.1501-1514, 2006 (Journal Indexed in SCI)
- XX. **Linking the viscous and vacancy behavior of high molecular weight hydrocarbons**
Yahsi U., Sahin F.
RHEOLOGICA ACTA, vol.43, no.2, pp.159-167, 2004 (Journal Indexed in SCI)
- XXI. **Equation of state of alkane and alkylbenzene liquids: A test of the group contributions of scaling parameters for physical and chemical mixtures**
Yahsi U., Kuzeci S., Alevli M.
INTERNATIONAL JOURNAL OF THERMOPHYSICS, vol.23, no.2, pp.501-512, 2002 (Journal Indexed in SCI)
- XXII. **Viscous behavior of linear and three-branch alkanes: Linking the equilibrium and transport theories**
YAŞI U.
JOURNAL OF POLYMER SCIENCE PART B-POLYMER PHYSICS, vol.37, no.9, pp.879-887, 1999 (Journal Indexed in SCI)
- XXIII. **Equation of state of poly(dimethylsiloxane) melts**
Sachdev V., YAŞI U., Jain R.
JOURNAL OF POLYMER SCIENCE PART B-POLYMER PHYSICS, vol.36, no.5, pp.841-850, 1998 (Journal Indexed in SCI)
- XXIV. **Interrelationships between P-V-T and flow behavior of linear and nonlinear hydrocarbons**
YAŞI U.
POLYMER ENGINEERING AND SCIENCE, vol.38, no.3, pp.464-470, 1998 (Journal Indexed in SCI)
- XXV. **STATISTICAL THERMODYNAMICS OF HYDROCARBON FLUIDS - SCALING PARAMETERS AND THEIR GROUP CONTRIBUTIONS**
SIMHA R., YAŞI U.
JOURNAL OF THE CHEMICAL SOCIETY-FARADAY TRANSACTIONS, vol.91, no.16, pp.2443-2455, 1995 (Journal Indexed in SCI)
- XXVI. **MOLECULAR WEIGHT-DEPENDENCE OF FREE-VOLUME IN POLYSTYRENE STUDIED BY POSITRON-ANNIHILATION MEASUREMENTS**
YU Z., YAŞI U., MCGERVEY J., JAMIESON A., SIMHA R.
JOURNAL OF POLYMER SCIENCE PART B-POLYMER PHYSICS, vol.32, no.16, pp.2637-2644, 1994 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **ATAKTİK VE SİNDİYOTAKTİK POLİSTİRENİN VİSKOZİTE BOŞLUK KESRİ DAVRANIŞININ TAKTİSİTEYE ETKİSİ**
Dinç F. Ş. , Sorrentino A., TAV C., YAŞI U.
Journal of the Turkish Chemical Society A: Chemistry, vol.2, pp.12-14, 2015 (Other Refereed National Journals)

Books & Book Chapters

- I. **Problemlerle Klasik Mekanik**
YAHŞI U.
Literatür Yayıncılık, Beyoğlu, İstanbul, İstanbul, 2012

Refereed Congress / Symposium Publications in Proceedings

- I. **Correlation between Free Volume Holes and Mechanical Properties of Side Chain LCP-HDPE Graft Products**
ÖZTÜRK ŞEN B., YAHŞI U., ÇETİN S., TAV C., YENER M. Y., SOYKAN U.
ICACCHE 2nd International Conference on Applications in Chemistry and Chemical Engineering, Belgrade, Serbia And Montenegro, 10 - 14 October 2018
- II. **Some Studies Related to the Determination of Factors Affecting Positronium Formation of High Density Polyethylene (HDPE) via Positron Annihilation Lifetime Spectroscopy (PALS)**
ÖZTÜRK ŞEN B., YAHŞI U., TAV C.
ICACCHE 2nd International Conference on Applications in Chemistry and Chemical Engineering, Belgrade, Serbia And Montenegro, 10 - 14 October 2018
- III. **Analysis of Positron Lifetime Spectra with Bayesian Inference**
ÜSTÜNDAĞ D., YAHŞI U.
5th INTERNATIONAL CONFERENCE ON COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING (ICCES-2018), 12 - 16 October 2018
- IV. **Ionic Conductivity of PVdF-co-HFP with Li-salts in terms of Free Volume Probed by Positron Annihilation Lifetime Spectroscopy**
YAHŞI U., TAV C., ERDEMCİ TANDOĞAN G., COŞKUN B., DELİGÖZ H., YILMAZTÜRK S., YILMAZOĞLU M., ULUTAŞ H. K., DEGER D., YAKUT Ş.
Uluslararası Katılımlı VII. Polimer Bilim ve Teknoloji Kongresi, Eskişehir, Turkey, 9 - 12 September 2018
- V. **Temperature and Pressure Dependent Relaxation of Polymers In Terms of Free Volume Fraction**
YAHŞI U., COŞKUN B., YUMAK YAHŞI A., TAV C.
Uluslararası Katılımlı VII. Polimer Bilim ve Teknoloji Kongresi (Polimer 2018), Eskişehir, Turkey, 9 - 12 September 2018
- VI. **Ionic Conductivity of PVdF-co-HFP with Li-salts In Terms of Free Volume Probed by Positron Annihilation Lifetime Spectroscopy**
TAV C., ULUTAŞ H. K., DELİGÖZ H., YILMAZOĞLU M., ULUTAŞ D., YAKUT Ş., COŞKUN B., ERDEMCİ G., YILMAZTÜRK S., YAHŞI U.
Uluslararası Katılımlı VII. Polimer Bilim ve Teknoloji Kongresi (Polimer 2018), 9 - 12 September 2018
- VII. **DC Conductivity, Thermal and Free Volume Properties of Thermoplastic polyurethane/boron nitride compounds**
YAHŞI U., YENER M. Y., MADAKBAŞ S., TAV C., DUMLUDAĞ F., UMER M. A.
Uluslararası Katılımlı VII. Polimer Bilim ve Teknoloji Kongresi (Polimer 2018), 9 - 12 September 2018
- VIII. **Investigation of a Relationship Between Free Volume and Ionic Conductivity of PVdF-co-HFP with Ionic Liquid**
YAHŞI U., TAV C., ULUTAŞ H. K., DELİGÖZ H., COŞKUN B., ERDEMCİ G., YILMAZTÜRK S., YILMAZOĞLU M., ULUTAŞ D., YAKUT Ş.
The International Joint Science Congress of Materials Polymers, 25 - 28 August 2017
- IX. **Free Volume Properties of Side Chain LCP-HDPE Graft Coproducts Probed by Positron Annihilation Lifetime Spectroscopy**
ÖZTÜRK ŞEN B., YAHŞI U., TAV C., ÇETİN S., YENER M. Y., SOYKAN U.
The International Joint Science Congress of Materials Polymers, 25 - 28 August 2017
- X. **The Surface Gradient Profile of Free Volume of PS, PMMA, and SAN using Simha-Somcynsky and**

Cahn-Hilliard Theories

YUMAK YAHŞI A., KUZECI S., TAV C., YAHŞI U.

The International Joint Science Congress of Materials Polymers, 25 - 28 August 2017

XI. **The Surface Gradient Profile of Free Volume of PS, PMMA, and SAN using Simha-Somcynsky and Cahn-Hilliard Theories**

YUMAK YAHŞI A., YAHŞI U., TAV C., KUZECI S.

The International Joint Science Congress of Materials Polymers ISCMP 2017, Ohrid, Macedonia, 25 - 28 August 2017

XII. **Influence of Hole Fraction on Elongational Viscosity of Polymer Melts**

DİNÇ F., SEDLACEK T., YAHŞI U.

Türk Fizik Derneği 33. Uluslararası Fizik Kongresi, 6 - 10 September 2017

XIII. **Investigation of relationship between Free volume and Ionic conductivity of pvdf-co-hfp with Ionic liquid**

YAHŞI U., TAV C., ERDEMCİ TANDOĞAN G., çoşkun b., DELİGÖZ H., yilmaztürk s., YILMAZOĞLU M., ULUTAŞ H. K., DEĞER D., Şahin Y.

The International Joint Science Congress of Materials Polymer, 25 - 28 August 2017

XIV. **Analysis of Positron Lifetime Spectra Using Bayesian Inference**

ÜSTÜNDAĞ D., CEVRİ M., YAHŞI U.

The 2nd IET International Conference on Intelligent Signal Processing (ISP) 2015, London, Canada, 1 - 02 December 2015, pp.1-6

Activities in Scientific Journals

International journal of advances in engineering and pure sciences (Online), Committee Member, 2018 - Continues

International journal of advances in engineering and pure sciences (Online), First Editor, 2014 - 2017

Citations

Total Citations (WOS):213

h-index (WOS):8

Scholarships

PhD Scholarship, Ministry of Education, 1988 - 1994

MSc. Scholarship, Ministry of Education, 1987 - 1988