

# Prof. NURAN ÖZÇİÇEK

## Personal Information

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## International Researcher IDs

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## Education Information

Doctorate, Hacettepe University, Fen Bilimleri, Turkey 1987 - 1992

Postgraduate, Hacettepe University, Fen Bilimleri, Kimya, Turkey 1985 - 1987

Undergraduate, Hacettepe University, Fen Fakültesi, Kimya, Turkey 1977 - 1982

## Foreign Languages

English, B2 Upper Intermediate

## Research Areas

Chemistry, Analytical Chemistry, Electromagnetic Methods, Natural Sciences

## Academic Titles / Tasks

Professor, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 2003 - Continues

Associate Professor, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 1998 - 2003

Assistant Professor, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 1996 - 1998

Research Assistant, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 1983 - 1996

## Advising Theses

ÖZÇİÇEK N., Yumuşak çelik üzerine 3-aminofenilboronik asit ve pirol'ün elektrokimyasal kopolimerizasyonu ve onun korozyon performansı, Postgraduate, H.SARIARSLAN(Student), 2016

ÖZÇİÇEK N., Enerji depolanması için tartarik asit katkılanmış polipirol bazlı süper kapasitör malzemelerinin sentezi, Postgraduate, E.KARACA(Student), 2013

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

1. A facile one-step electrosynthesis of polypyrrole/nano-SbO<sub>x</sub> composite for supercapacitors

Çekiç M. G., Karaca E., Pekmez N.

SYNTHETIC METALS, vol.293, no.293, pp.117262-117279, 2023 (SCI-Expanded)

- II. **Cytotoxic, apoptotic and necrotic effects of starch coated copper nanoparticles on Capan 1 pancreatic cancer cells**  
Ilbasmis-Tamer S., Turk M., Evran Ş., BOYACI İ. H., Ciftci H., TAMER U.  
Journal of Drug Delivery Science and Technology, vol.79, 2023 (SCI-Expanded)
- III. **The use of some sulfonic acids for improving aluminum current collector resistance**  
KARACA E., Pekmez N., PEKMEZ K.  
Materials Today Communications, vol.33, 2022 (SCI-Expanded)
- IV. **A simple in situ deposition of metal alloys on graphite surface based on Sb, Bi, Cu, and Sn as an electrocatalyst for V-3(+)/V-2(+) redox reaction**  
ÖZÇELİK N., ERTEKİN Z., Pekmez N., PEKMEZ K.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.46, no.15, pp.22001-22013, 2022 (SCI-Expanded)
- V. **Nano MnO<sub>x</sub> encapsulated pyrrole-carbazole copolymer and polyvinyl chloride/carbon-coated flexible electrodes for solid-state supercapacitor cell**  
KARACA E., Ozgenc G., Pekmez N., PEKMEZ K.  
JOURNAL OF ENERGY STORAGE, vol.55, 2022 (SCI-Expanded)
- VI. **4.2 V Stack of metal oxide-polypyrrole-based composite electrodes and their power management**  
KARACA E., GÖKCEN D., Pekmez N., PEKMEZ K., Uğur M., Aksu N. D.  
International Journal of Energy Research, vol.44, no.11, pp.8666-8680, 2020 (SCI-Expanded)
- VII. **Evaluation of corrosion resistance of Co-Cr alloys fabricated with different metal laser sintering systems**  
TUNA S. H., KARACA E., Aslan I., Pekkan G., Pekmez N.  
Journal of Advanced Prosthodontics, vol.12, no.3, pp.114-123, 2020 (SCI-Expanded)
- VIII. **One-step electrochemical deposition of thin film titanium suboxide in basic titanil sulfate solution at room temperature**  
ERTEKİN Z., Pekmez N., PEKMEZ K.  
JOURNAL OF SOLID STATE ELECTROCHEMISTRY, vol.24, no.4, pp.975-986, 2020 (SCI-Expanded)
- IX. **Galvanostatic synthesis of nanostructured Ag-Ag<sub>2</sub>O dispersed PPy composite on graphite electrode for supercapacitor applications**  
KARACA E., GÖKCEN D., Pekmez N., PEKMEZ K.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.44, pp.158-170, 2020 (SCI-Expanded)
- X. **Electrochemical synthesis of PPy composites with nanostructured MnO<sub>x</sub>, CoO<sub>x</sub>, NiO<sub>x</sub>, and FeO<sub>x</sub> in acetonitrile for supercapacitor applications**  
Karaca E., GÖKCEN D., Pekmez N., PEKMEZ K.  
ELECTROCHIMICA ACTA, vol.305, pp.502-513, 2019 (SCI-Expanded)
- XI. **Memristive behavior of TiO<sub>x</sub> obtained via Pb(II)-assisted anodic oxidation process**  
GÖKCEN D., Senturk O., Karaca E., Pekmez N., PEKMEZ K.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.30, no.6, pp.5733-5743, 2019 (SCI-Expanded)
- XII. **One-step electrosynthesis of polypyrrole/PbO<sub>x</sub> composite in acetonitrile as supercapacitor electrode material**  
Karaca E., GÖKCEN D., Pekmez N., PEKMEZ K.  
SYNTHETIC METALS, vol.247, pp.255-267, 2019 (SCI-Expanded)
- XIII. **An Enzyme-free H<sub>2</sub>O<sub>2</sub> Sensor Based on Poly(2-Aminophenylbenzimidazole)/Gold Nanoparticles Coated Pencil Graphite Electrode**  
Teker M. S., KARACA E., Pekmez N., Tamer U., PEKMEZ K.  
ELECTROANALYSIS, vol.31, no.1, pp.75-82, 2019 (SCI-Expanded)
- XIV. **Electrosynthesis of polypyrrole-vanadium oxide composites on graphite electrode in acetonitrile in the presence of carboxymethyl cellulose for electrochemical supercapacitors**  
KARACA E., PEKMEZ K., Pekmez N.

- ELECTROCHIMICA ACTA, vol.273, pp.379-391, 2018 (SCI-Expanded)
- XV. **Investigation of the behavior of hydrogen-bonded phenolic compounds and their determination by using poly(vinylferrocenium)-polyaniline composite film**  
KAVANOZ M., Pekmez N. O., Can M.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.133, no.27, 2016 (SCI-Expanded)
- XVI. **Charge-Transfer Complex of p-Aminodiphenylamine with Maleic Anhydride: Spectroscopic, Electrochemical, and Physical Properties**  
KARACA E., Can H., BOZKAYA U., Pekmez N.  
CHEMPHYSICHEM, vol.17, no.13, pp.2056-2065, 2016 (SCI-Expanded)
- XVII. **Corrosion resistance assessment of Co-Cr alloy frameworks fabricated by CAD/CAM milling, laser sintering, and casting methods**  
TUNA S. H., Pekmez N., KÜRKÇÜOĞLU I.  
JOURNAL OF PROSTHETIC DENTISTRY, vol.114, no.5, pp.725-734, 2015 (SCI-Expanded)
- XVIII. **Galvanostatic deposition of polypyrrole in the presence of tartaric acid for electrochemical supercapacitor**  
KARACA E., PEKMEZ N., PEKMEZ K.  
ELECTROCHIMICA ACTA, vol.147, pp.545-556, 2014 (SCI-Expanded)
- XIX. **The electrochemical copolymerization of pyrrole and bithiophene on stainless steel in the presence of SDS in aqueous medium and its anticorrosive performance**  
Pekmez N., Cinkilli K., ZEYBEK B.  
PROGRESS IN ORGANIC COATINGS, vol.77, no.8, pp.1277-1287, 2014 (SCI-Expanded)
- XX. **Electropreparation of (+/-)-10-Camphorsulfonate-Doped Poly(o-phenylenediamine) in Acetonitrile and Its Use in Determination of Glucose**  
Zeybek B., Pekmez N., KILIÇ E.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.131, no.3, 2014 (SCI-Expanded)
- XXI. **An enzyme free potentiometric detection of glucose based on a conducting polymer poly (3-aminophenyl boronic acid-co-3-octylthiophene)**  
Ciftci H., Tamer U., SEN TEKER M., Pekmez N. O.  
ELECTROCHIMICA ACTA, vol.90, pp.358-365, 2013 (SCI-Expanded)
- XXII. **Development of an Amperometric Enzyme Electrode based on Poly(o-Phenylenediamine) for the Determination of Total Cholesterol in Serum**  
KOYUNCU ZEYBEK D., ZEYBEK B., Pekmez N., PEKYARDIMCI Ş., KILIÇ E.  
JOURNAL OF THE BRAZILIAN CHEMICAL SOCIETY, vol.23, no.12, pp.2222-2231, 2012 (SCI-Expanded)
- XXIII. **Fabrication and characterization of poly(vinylferrocenium) perchlorate/poly(3,4-ethylenedioxythiophene) composite-coated electrode in methylene chloride**  
Sen Teker M., TAMER U., Pekmez N.  
SYNTHETIC METALS, vol.162, pp.924-930, 2012 (SCI-Expanded)
- XXIV. **Poly(vinylferrocenium) perchlorate-polyaniline composite film-coated electrode for amperometric determination of hydroquinone**  
ÖZÇİÇEK N.  
JOURNAL OF SOLID STATE ELECTROCHEMISTRY, vol.16, pp.1175-1186, 2012 (SCI-Expanded)
- XXV. **Carbon nanotubes/alizarin red S-poly(vinylferrocene) modified glassy carbon electrode for selective determination of dopamine in the presence of ascorbic acid**  
Sen M., Tamer U., Pekmez N.  
JOURNAL OF SOLID STATE ELECTROCHEMISTRY, vol.16, no.2, pp.457-463, 2012 (SCI-Expanded)
- XXVI. **Electrochemical synthesis of bilayer coatings of poly(N-methylaniline) and polypyrrole on mild steel and their corrosion protection performances**  
Zeybek B., Pekmez N., KILIÇ E.  
ELECTROCHIMICA ACTA, vol.56, no.25, pp.9277-9286, 2011 (SCI-Expanded)
- XXVII. **ELECTROCHEMICAL PREPARATION OF POLY(VINYLFERROCENIUM)-PERCHLORATE-POLYANILINE COMPOSITE-MODIFIED PLATINIUM ELECTRODE IN METHYLENE CHLORIDE**

Kavanoz M., ŞEN M., Pekmez N. O.

COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, vol.76, no.12, pp.1855-1877, 2011 (SCI-Expanded)

- XXVIII. **The influence of the pure metal components of four different casting alloys on the electrochemical properties of the alloys**  
TUNA S. H., Pekmez N., KEYF F., Canli F.  
DENTAL MATERIALS, vol.25, no.9, pp.1096-1103, 2009 (SCI-Expanded)
- XXIX. **THE ELECTROCHEMICAL PROPERTIES OF FOUR DENTAL CASTING SUPRASTRUCTURE ALLOYS COUPLED WITH TITANIUM IMPLANTS**  
TUNA S. H., Pekmez N., KEYF F., Canli F.  
JOURNAL OF APPLIED ORAL SCIENCE, vol.17, no.5, pp.467-475, 2009 (SCI-Expanded)
- XXX. **Polybithiophene and its bilayers with polyaniline coatings on stainless steel by electropolymerization in aqueous medium**  
Pekmez N., Abaci E., Cinkilli K., Yagan A.  
PROGRESS IN ORGANIC COATINGS, vol.65, no.4, pp.462-468, 2009 (SCI-Expanded)
- XXXI. **Chemical polymerization of aniline using periodic acid in acetonitrile**  
Can M., Uzun S., Pekmez N.  
SYNTHETIC METALS, vol.159, no.14, pp.1486-1490, 2009 (SCI-Expanded)
- XXXII. **Electrochemical synthesis of poly(N-methylaniline) on an iron electrode and its corrosion performance**  
Yagan A., Pekmez N., Yildiz A.  
ELECTROCHIMICA ACTA, vol.53, no.16, pp.5242-5251, 2008 (SCI-Expanded)
- XXXIII. **Poly (N-ethylaniline) coatings on 304 stainless steel for corrosion protection in aqueous HCl and NaCl solutions**  
Yagan A., Pekmez N., Yildiz A.  
ELECTROCHIMICA ACTA, vol.53, no.5, pp.2474-2482, 2008 (SCI-Expanded)
- XXXIV. **Poly(N-methylaniline) coatings on stainless steel by electropolymerization**  
Yagan A., Pekmez N., Yildiz A.  
CORROSION SCIENCE, vol.49, no.7, pp.2905-2919, 2007 (SCI-Expanded)
- XXXV. **Inhibition of corrosion of mild steel by homopolymer and bilayer coatings of polyaniline and polypyrrole**  
Yagan A., Pekmez N., Yildiz A.  
PROGRESS IN ORGANIC COATINGS, vol.59, no.4, pp.297-303, 2007 (SCI-Expanded)
- XXXVI. **Investigation of protective effect of poly(N-ethylaniline) coatings on iron in various corrosive solutions**  
Yagan A., Pekmez N., Yildiz A.  
SURFACE & COATINGS TECHNOLOGY, vol.201, pp.7339-7345, 2007 (SCI-Expanded)
- XXXVII. **Corrosion inhibition by poly (N-ethylaniline) coatings of mild steel in aqueous acidic solutions**  
Yagan A., Pekmez N., Yildiz A.  
PROGRESS IN ORGANIC COATINGS, vol.57, no.4, pp.314-318, 2006 (SCI-Expanded)
- XXXVIII. **Effect of electrolyte and monomer concentration on anticorrosive properties of poly(N-methylaniline) and poly(N-ethylaniline) coated mild steel**  
Yagan A., Pekmez N., Yildiz A.  
SYNTHETIC METALS, vol.156, pp.664-670, 2006 (SCI-Expanded)
- XXXIX. **Electropolymerization of poly(N-ethyl aniline) on mild steel: Synthesis, characterization and corrosion protection**  
Yagan A., Pekmez N., Yildiz A.  
ELECTROCHIMICA ACTA, vol.51, no.14, pp.2949-2955, 2006 (SCI-Expanded)
- XL. **Electropolymerization of poly(N-methylaniline) on mild steel: Synthesis, characterization and corrosion protection**  
Yagan A., Pekmez N., Yildiz A.

- JOURNAL OF ELECTROANALYTICAL CHEMISTRY, vol.578, no.2, pp.231-238, 2005 (SCI-Expanded)
- XL1. **Investigation of catalytic effects of the proton and Lewis acids on oligomerization and chemical polymerization of pyrrole**  
Can M., Ozaslan H., Isildak O., Pekmez N., Yildiz A.  
POLYMER, vol.45, no.20, pp.7011-7016, 2004 (SCI-Expanded)
- XLII. **Spectroelectrochemical investigations of aniline-thiophene copolymers in acetonitrile**  
ÖZÇİÇEK N., Pekmez K., Holze R., Yildiz A.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.90, no.12, pp.3417-3423, 2003 (SCI-Expanded)
- XLIII. **Increased stability of polythiophene in the presence of aniline in acetonitrile**  
ÖZÇİÇEK N., Pekmez K., Holze R., Yildiz A.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.89, no.3, pp.862-866, 2003 (SCI-Expanded)
- XLIV. **Theoretical investigation of the proton effect on electropolymerization of aniline**  
Can M., Pekmez N., Yildiz A.  
POLYMER, vol.44, no.8, pp.2585-2588, 2003 (SCI-Expanded)
- XLV. **Electrocatalysis of polyaniline formation by PbO<sub>2</sub> in acetonitrile**  
Abaci S., Pekmez K., Pekmez N., Yildiz A.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.87, no.4, pp.599-605, 2003 (SCI-Expanded)
- XLVI. **Voltammetric determination of cilazapril in pharmaceutical formulations**  
Tamer U., ÖZÇİÇEK N., Atay O., Yildiz A.  
JOURNAL OF PHARMACEUTICAL AND BIOMEDICAL ANALYSIS, vol.29, pp.43-50, 2002 (SCI-Expanded)
- XLVII. **Electropolymerization of acetonitrile solutions containing aniline and thiophene**  
Can M., PEKMEZ K., Pekmez N., Yildiz A.  
Synthetic Metals, vol.104, no.1, pp.9-17, 1999 (SCI-Expanded)
- XLVIII. **Electropolymerization of thiophene with and without aniline in acetonitrile**  
Özçiçek N.  
TURKISH JOURNAL OF CHEMISTRY, vol.22, no.1, pp.47-54, 1998 (SCI-Expanded)

## Articles Published in Other Journals

- I. **The effect of hydrogen bonding on the electroreduction behavior of aminobenzimidazoles**  
Özçiçek N.  
Acta chimica slovenica, vol.51, no.3, pp.1-10, 2004 (Scopus)
- II. **Electroreparation of polyaniline in the presence of anhydrous cuprous ions in acetonitrile**  
Pekmez N., Yildiz A.  
Journal of Electroanalytical Chemistry, vol.386, no.1-2, pp.121-126, 1995 (Scopus)
- III. **Electrochemical behavior of polyaniline films in acetonitrile**  
Pekmez N., PEKMEZ K., Yildiz A.  
Journal of Electroanalytical Chemistry, vol.370, no.1-2, pp.223-229, 1994 (Scopus)
- IV. **The effect of monomer and acid concentrations on electrochemical polyaniline formation in acetonitrile**  
Pekmez N., PEKMEZ K., Arca M., Yildiz A.  
Journal of Electroanalytical Chemistry, vol.353, no.1-2, pp.237-246, 1993 (Scopus)
- V. **The electro-oxidation of p-aminodiphenylamine in acetonitrile**  
Pekmez N., PEKMEZ K., Yildiz A.  
Journal of Electroanalytical Chemistry, vol.348, no.1-2, pp.389-398, 1993 (Scopus)

## Refereed Congress / Symposium Publications in Proceedings

- I. **One-step electrosynthesis of polypyrrole/PbO<sub>x</sub> composite in acetonitrile as supercapacitor electrode**

## material

KARACA E., GÖKCEN D., ÖZÇİÇEK N., PEKMEZ K.

Electrochemistry Conference 2019, İstanbul, Turkey, 11 - 13 September 2019

II. **Galvanostatic deposition of polypyrrole on pencil graphite electrode in the presence of vanadyl tetrafluoroborate and Triton-X 100 for electrochemical supercapacitor**

KARACA E., ÖZÇİÇEK N., PEKMEZ K.

ISEE Cap 2017 5th International Symposium on Enhanced Electrochemical Capacitors, 10 - 14 July 2017

III. **Electrodeposition of Polypyrrole containing Manganous ions in Acetonitrile Solution on pencil graphite electrode for Electrochemical Supercapacitor**

KARACA E., PEKMEZ K., ÖZÇİÇEK N.

5th International Symposium on Enhanced Electrochemical Capacitors, 10 - 14 July 2017

IV. **Galvanostatic Deposition of Polypyrrole Cobalt Perchlorate on pencil graphite electrode in the presence of graphene for Electrochemical Supercapacitor**

KARACA E., ÖZÇİÇEK N., PEKMEZ K.

3rd Emerging 2D Materials & Graphene Conference from Laboratory to Industry 2016, İstanbul, Turkey, 20 - 21 November 2016

V. **A new charge transfer Complex of p aminodiphenyldiamne with maleic anhydride**

KARACA E., KAPLAN CAN H., ÖZÇİÇEK N.

AACD 2016, International Conference 10th Aegean Chemistry days, Çanakkale, Turkey, 29 September - 02 October 2016

VI. **A New Charge Transfer Complex of P Aminodiphenyldiamine with Maleic Anhydride**

KARACA E., KAPLAN CAN H., ÖZÇİÇEK N.

10th Aegean Analytical Chemistry Days, Ankara, Turkey, 29 September - 02 October 2016

## Supported Projects

ÖZÇİÇEK N., Project Supported by Higher Education Institutions, Yenilikçi Elektrokimyasal Kapasitörlerin İncelenmesi ve Uygulamaları, 2017 - 2017

ÖZÇİÇEK N., Project Supported by Higher Education Institutions, Susuz ortamda karbon elektrot temelli pil tipi elektrokimyasal süperkapasitör aktif elektrotların incelenmesi, 2017 - 2017

ÖZÇİÇEK N., Project Supported by Higher Education Institutions, Bazı Benzimidazol bileşiklerinin Cu yüzeyi üzerinde korozyondan koruma özelliklerinin incelenmesi, 2016 - 2016

ÖZÇİÇEK N., KARACA E., SARIARSLAN H., Project Supported by Higher Education Institutions, Yumuşak Çelik Üzerine Poli3Aminofenilboronik asit ve Poli3Aminofenilboronik asitPiról Kopolimerinin Elektrosentezi Karakterizasyonu ve Korozyon Performansı, 2016 - 2016

ÖZÇİÇEK N., Project Supported by Higher Education Institutions, İletken polimer bazlı kompozit elektrot malzemelerinin elektrokimyasal empedans spektroskopisi yoluyla karakterizasyonu, 2015 - 2016

ÖZÇİÇEK N., Project Supported by Higher Education Institutions, (Aminofenil)benzimidazol lerin Sentezi, Elektropolimerizasyonu ve İletken Polimerlerin Monomerleri ile Kopolimerizasyonu, 2014 - 2015

## Metrics

Publication: 63

Citation (WoS): 763

Citation (Scopus): 1122

H-Index (WoS): 17

H-Index (Scopus): 21