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### Uluslararası Araştırmacı ID'leri

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Publons / Web Of Science ResearcherID: C-3604-2016

Yoksis Araştırmacı ID: 177910

### Eğitim Bilgileri

Post Doktora, Technische Universitaet Berlin, Matematik Ve Fen Fakültesi, Kimya-Fonksiyonel Malzeme Sentezi , Almanya 2005 - 2012

Doktora, Technische Universitaet Berlin, Matematik Ve Fen Fakültesi, Institut Für Chemie, Almanya 1998 - 2004

Yüksek Lisans, Akdeniz Üniversitesi, Fen Edebiyat Fakültesi, Kimya Bölümü, Türkiye 1994 - 1996

Lisans, Akdeniz Üniversitesi, Fen Edebiyat Fakültesi, Kimya Bölümü, Türkiye 1990 - 1994

### Yabancı Diller

İngilizce, C1 İleri

Almanca, C1 İleri

Fransızca, C1 İleri

### Yaptığı Tezler

Doktora, "Organokalay Dendrimerlerin Sentezlenmesi ve Yapılarının Aydınlatılması" , Technische Universitaet Berlin, Matematik Ve Fen Fakültesi, Kimya Enstitüsü, 2005

Yüksek Lisans, "Metal Alkolatların  $\beta$ -diketon ve  $\beta$ -ketoesterlerle Kompleksleşmeleri ve Komplekslerin Hidroliz Reaksiyonları" , Akdeniz Üniversitesi, Fen Fakültesi, Kimya, 1996

### Araştırma Alanları

Malzeme Bilimi ve Mühendisliği, Seramik Malzemeler, Yarıiletken ve Süperiletken Malzemeler, Optik Özellikler, Elektriksel ve Manyetik Özellikler, Kimyasal ve Elektrokimyasal Özellikler, Kompozitler, Polimerik Malzemeler, Kaplama Teknolojileri, Malzeme Karakterizasyonu, Nanomalzemeler, Yapı-Özellik İlişkisi , Kimya, Fizikokimya, Fonksiyonel Polimerler, Kompozitler, Nanokompozitler, Polimer Kimyada Yeni Teknolojiler, Polimerik Malzemeler, Spektroskopi, İnorganik Kimya, Geçiş Elementleri, İnorganik Polimerler, Kataliz, Nanokümler, Organometalik Kimya , Silikon Kimyası, Yeni Ligandlar, Yığınlar/Katılar ve Yüzeyler, Organik Kimya, Makromoleküller Kimyası, Organik Spektroskopi, Organometalik Bileşikler, Temel Bilimler

## Akademik Unvanlar / Görevler

Yrd. Doç. Dr., Akdeniz Üniversitesi, Mühendislik Fakültesi, Malzeme Bilimi Ve Mühendisliği, 2012 - Devam Ediyor

## Verdiği Dersler

Malzeme Bilimi ve Mühendisliği, Lisans, 2014 - 2015

Organik Kimya, Lisans, 2013 - 2014

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Genel Kimya, Lisans, 2013 - 2014, 2012 - 2013

## SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **The crystal structure of the co-crystal tetrakis[2-(tris(4-methoxyphenyl)stannyl)ethyl]silane - tetrahydrofuran - toluene - tetrahydrofuran (1/1/1) C103H116O13SiSn4**  
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- II. **Silica material variation for the  $MnxOy-Na2WO4/SiO2$**   
Yildiz M., AKSU Y., Simon U., Otremba T., Kailasam K., Goebel C., Girgsdies F., Goerke O., Rosowski F., Thomas A., et al.  
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- III. **Support material variation for the  $MnxOy-Na2WO4/SiO2$  catalyst.**  
Yıldız M., Simon U., Otremba T., AKSU Y., Kailasam K., Thomas A., Schomaecker R., Arndt S.  
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- IV. **Enhanced catalytic performance of  $MnxOy-Na2WO4/SiO2$  for the oxidative coupling of methane using an ordered mesoporous silica support**  
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- V. **A One-Pot Approach to Mesoporous Metal Oxide Ultrathin Film Electrodes Bearing One Metal Nanoparticle per Pore with Enhanced Electrocatalytic Properties**  
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- VI. **Chemoselective reduction of alpha,beta-unsaturated aldehydes and ketones over mesoporous B(O(i) Pr)(3)-MCM-41 catalyst via MPV reduction process: preparation, characterization and catalytic application**  
Uysal B., Aksu Y., Oksal B. Ş.  
JOURNAL OF POROUS MATERIALS, cilt.20, sa.1, ss.115-127, 2013 (SCI-Expanded)
- VII. **Facile Low-Temperature Approach to Tin-Containing ZnO Nanocrystals with Tunable Tin Concentrations Using Heterobimetallic Sn/Zn Single-Source Precursors**  
Tsaroucha M., AKSU Y., Epping J. D., Driess M.  
CHEMPLUSCHEM, cilt.78, sa.1, ss.62-69, 2013 (SCI-Expanded)
- VIII. **Supported ZnO catalysts for the conversion of alkanes: About the metamorphosis of a heterogeneous catalyst**  
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- IX. **From Molecular Gallium and Indium Siloxide Precursors to Amorphous Semiconducting Transparent Oxide Layers for Applications in Thin-Film Field-Effect Transistors**  
Samedov K., AKSU Y., Driess M.  
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- X. **Heterometallic Indium Lithium Halostannates: Low-Temperature Single-Source Precursors for Tin-Rich Indium Tin Oxides and Their Application for Thin-Film Transistors**  
Samedov K., AKSU Y., Driess M.  
CHEMISTRY-A EUROPEAN JOURNAL, cilt.18, sa.25, ss.7766-7779, 2012 (SCI-Expanded)
- XI. **Facile Molecular Approach to Transparent Thin-Film Field-Effect Transistors with High-Performance Using New Homo- and Heteroleptic Indium(III)-Tin(II) Single-Source Precursors**  
Samedov K., AKSU Y., Driess M.  
CHEMISTRY OF MATERIALS, cilt.24, sa.11, ss.2078-2090, 2012 (SCI-Expanded)
- XII. **Li-doped MgO From Different Preparative Routes for the Oxidative Coupling of Methane**  
Arndt S., Simon U., Heitz S., Berthold A., Beck B., Goerke O., Epping J. -, Otremba T., AKSU Y., Irran E., et al.  
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- XIII. **Synthesis of Stannyl-Substituted Zn<sub>4</sub>O<sub>4</sub> Cubanes as Single-Source Precursors for Amorphous Tin-Doped ZnO and Zn<sub>2</sub>SnO<sub>4</sub> Nanocrystals and Their Potential for Thin Film Field Effect Transistor Applications**  
Tsaroucha M., AKSU Y., Irran E., Driess M.  
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- XIV. **Facile Access to Homo- and Heteroleptic, Triply Bonded Dimolybdenum Hexaalkoxides with Unsaturated Alkoxide Ligands**  
Krackl S., Ma J., AKSU Y., Driess M.  
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- XV. **Raman and Photoluminescence Spectroscopic Detection of Surface-Bound Li<sup>+</sup>O<sub>2</sub><sup>-</sup> Defect Sites in Li-Doped ZnO Nanocrystals Derived from Molecular Precursors**  
Kirste R., AKSU Y., Wagner M. R., Khachadorian S., Jana S., Driess M., Thomsen C., Hoffmann A.  
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- XVI. **A Molecular Precursor Approach to Tunable Porous Tin-Rich Indium Tin Oxide with Durable High Electrical Conductivity for Bioelectronic Devices**  
AKSU Y., Frasca S., Wollenberger U., Driess M., Thomas A.  
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- XVII. **Unprecedented Alkylzinc-Magnesium Alkoxide Clusters as Suitable Organometallic Precursors for Magnesium-Containing ZnO Nanoparticles**  
Heitz S., AKSU Y., Merschjann C., Driess M.  
CHEMISTRY-A EUROPEAN JOURNAL, cilt.17, sa.14, ss.3904-3910, 2011 (SCI-Expanded)
- XVIII. **Entrapment of Heteropolyacids in Metallic Silver Matrices: Unique Heterogenized Acid Catalysts**  
Krackl S., Company A., AKSU Y., Avnir D., Driess M.  
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- XIX. **Molecular Heterobimetallic Approach to Li-Containing MgO Nanoparticles with Variable Li-Concentrations Using Lithium-Methylmagnesium Alkoxide Clusters**  
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- XX. **Reply to Comment on "Methylmagnesium Alkoxide Clusters with Mg<sub>4</sub>O<sub>4</sub> Cubane- and Mg<sub>7</sub>O<sub>8</sub> Biscubane-Like Cores: Organometallic Precursors for Low-Temperature Formation of MgO Nanoparticles with Variable Surface Defects"**  
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- XXI. **Hydrothermal Synthesis and Crystal Structures of Cd(II)-Based 1D Coordination Polymer and Mn(II) Coordination Complex with Mixed N- and O-donor Ligands: [Cd-2(4-4'-bpy)(2)(pa)(4)] (n) center dot 0.25(H<sub>2</sub>O) and [Mn(4-4'-bpy)(2)(pa)(H<sub>2</sub>O)(3)]ClO<sub>4</sub> center dot 2(H<sub>2</sub>O)**  
Kani I., AKSU Y.  
JOURNAL OF INORGANIC AND ORGANOMETALLIC POLYMERS AND MATERIALS, cilt.20, sa.1, ss.69-77, 2010 (SCI-Expanded)
- XXII. **Methylmagnesium Alkoxide Clusters with Mg<sub>4</sub>O<sub>4</sub> Cubane- and Mg<sub>7</sub>O<sub>8</sub> Biscubane-Like Cores:**

**Organometallic Precursors for Low-Temperature Formation of MgO Nanoparticles with Variable Surface Defects**

Heitz S., AKSU Y., Merschjann C., Driess M.

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- XXIII. **Activation of C-H bonds mediated by Mo Mo moieties in heterobimetallic Zn/O/Mo clusters**  
Ma J., AKSU Y., Gregoriades L. J., Sauer J., Driess M.  
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- XXIV. **Lithium related deep and shallow acceptors in Li-doped ZnO nanocrystals**  
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- XXV. **A Systematic Study on Zinc Oxide Materials Containing Group I Metals (Li, Na, K)-Synthesis from Organometallic Precursors, Characterization, and Properties**  
Polarz S., Orlov A., Hoffmann A., Wagner M. R., Rauch C., Kirste R., Gehlhoff W., AKSU Y., Driess M., van den Berg M. W. E., et al.  
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- XXVI. **The Catalytic Activity of Zinc Oxides from Single Source Precursors with Additives for the C-H Activation of Lower Alkanes**  
Arndt S., AKSU Y., Driess M., Schomaecker R.  
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- XXVII. **A Low-Temperature Molecular Approach to Highly Conductive Tin-Rich Indium Tin Oxide Thin Films with Durable Electro-Optical Performance**  
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- XXVIII. **One-pot synthesis of lithium alkylzinc alkoxo heterocubanes with a LiZn<sub>3</sub>O<sub>4</sub> core as suitable organometallic precursors for Li-containing ZnO nanocrystals**  
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- XXIX. **Synthesis and characterization of alpha,omega-bis[tri-(w-triphenylstannyl)butylstannyl]alkanes as starting materials for organotin dendrimers**  
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- XXX. **Synthesis and characterization of silicon-based group 14 dendrimers Si{(CH<sub>2</sub>)<sub>2</sub>Sn[(CH<sub>2</sub>)<sub>4</sub>MPh<sub>3</sub>]<sub>3</sub>}(4) (M = Ge, Sn)**  
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- XXXI. **Synthesis and characterization of new silicon-centred tin-dendrimers Si[CH<sub>2</sub>CH<sub>2</sub>SnR<sub>3</sub>]<sub>4</sub>. Single-crystal X-ray structure of the tetrahydrofuran adduct of tetrakis [2-(tribromostannyl)ethyl]silane**  
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- XXXII. **Convergent synthesis and characterization of organotin dendrimers Sn{(CH<sub>2</sub>)<sub>n</sub>Sn[(CH<sub>2</sub>)<sub>4</sub>SnPh<sub>3</sub>]<sub>3</sub>}(4) (n=3, 4)**  
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- XXXIII. **Synthesis and characterization of some organo-all-tin dendrimers with different peripheral substituents**  
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- XXXIV. **Synthesis and characterization of water-soluble tin-based metallodendrimers**  
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## Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **a,w-bis [tri-(w-triphenylstannyl)butylstannyl]alkanes as starting materials for organotin dendrimers for use in biomedical applications**  
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- II. **?, ?-bis [tri-(w-triphenylstannyl)butylstannyl]alkanes as starting materials for organotin dendrimers for use in biomedical applications**  
AKSU Y., Aksu S., Schumann H.  
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- III. **Transparent Thin-Film Field-Effect Transistors with High-Performance Using Novel Homo- and Heteroleptic Indium(III)-Tin(II) Single-Source Precursors**  
AKSU Y., Samedov K., Driess M.  
5th EuCheMS (European Association for Chemical and Molecular Sciences)-Chemistry Congress, İstanbul, Türkiye, 31 Ağustos - 04 Eylül 2014, ss.65
- IV. **Biosensors comprising enzymes coupled to mesoporous tin-rich indium tin oxide based transparent and conductive thin films prepared by employing a single source precursor approach**  
AKSU Y., Frasca S., Aksu S., Thomas A., Wollenberger U., Driess M.  
IUPAC 44th World Chemistry Congress, İstanbul, Türkiye, 11 - 16 Ağustos 2013, ss.109
- V. **Biosensors comprising enzymes coupled to mesoporous tin-rich indium tin oxide based transparent and conductive thin films prepared by employing a single source precursor approach**  
AKSU Y., Frasca S., AKSU S., Thomas A., Wollenberger U., Driess M.  
44th World Chemistry Congress, IUPAC 2013, İstanbul, Türkiye, 11 - 16 Ağustos 2013, ss.109
- VI. **Predesigning heterogeneous catalysts on the molecular scale: a unique way to high quality Lidoped MgO and related materials**  
AKSU Y., Heitz S., Driess M.  
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- VII. **Mn-Na<sub>2</sub>WO<sub>4</sub>/SiO<sub>2</sub> – An Industrial Catalyst for Methane Coupling?**  
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- VIII. **The Support Effect of the Mn/Na<sub>2</sub>WO<sub>4</sub> Catalyst in the Oxidative Coupling of Methane**  
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- IX. **The Support Effect of the Mn/Na<sub>2</sub>WO<sub>4</sub> Catalyst in the Oxidative Coupling of Methane**  
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- X. **Mesoporous Transparent Conductive Bio-interfaces**  
Güet A., Perez F., Frasca S., Thomas A., AKSU Y., Driess M., Wollenberger U., Fischer A.  
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- XI. **Towards OER-Catalyst Materials from Heterobimetallic Single Source Precursors**  
Pfrommer J., AKSU Y., Driess M.  
XV. International Symposium on Relations Between Homogeneous and Heterogeneous Catalysis, Berlin, Almanya, 11 - 16 Eylül 2011, ss.37
- XII. **Single Source Precursor Approach as a Unique Way to Design Li-doped MgO on the Molecular Scale**  
AKSU Y., Heitz S., Arndt S., Schomaecker R., Driess M.  
XV. International Symposium on Relations Between Homogeneous and Heterogeneous Catalysis, Berlin, Almanya,

11 - 16 Eylül 2011, ss.5

- XIII. **The Role of the Support of Mn-Na-W/Silica and Na-W/Silica**  
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- XIV. **Are Li/MgO and Gd-Li/MgO Suitable Catalysts for Methane Coupling?**  
Arndt S., Simon U., Heitz S., Otremba T., Berthold A., AKSU Y., Dinse K. P., Driess M., Schubert H., Schomaecker R.  
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- XV. **A Heterobimetallic Single Source Precursor Approach for OER Catalyst Materials**  
Pfrommer J., AKSU Y., Driess M.  
ISACS4 Challenges in Renewable Energy, Boston, Amerika Birleşik Devletleri, 5 - 08 Temmuz 2011, ss.73
- XVI. **Mesoporous transparent conducting oxides as a platform for bioelectronics**  
Frasca S., Richter C., von Graberg T., AKSU Y., Fischer A., Smarsky B. M., Hildebrandt P., Driess M., Wollenberger U.  
7. German Bio-Sensor Symposium, Heilbad-Heiligenstadt, Almanya, 3 - 06 Nisan 2011, ss.31
- XVII. **A single source molecular precursor approach to tunable porous tin-rich ITO film electrode for bioelectronic devices**  
AKSU Y., Driess M., Thomas A., Fischer A., Frasca S., Wollenberger U.  
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- XVIII. **Low Temperature Preparation of Zinc Oxide and Indium Tin Oxide Thin Films with Durable Electro-Optical Performance Using Molecular Precursors**  
AKSU Y., Driess M.  
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- XIX. **Mesoporous ITO and Tin-Rich ITO as a Novel Platform for Bioelectronics**  
Frasca S., von Graberg T., AKSU Y., Feng J., Thomas A., Smarsky B. M., Hildebrandt P., Driess M., Wollenberger U.  
61st Annual Meeting of the International Society of Electrochemistry, Nice, Fransa, 26 Eylül - 01 Ekim 2010, ss.111
- XX. **A Single-Source Precursor Approach for the Preparation of Stable Tin-Rich Indium Tin Oxide Thin Films with High Conductivity**  
AKSU Y., Driess M.  
GDCh (German Chemical Society)-Science Forum Chemistry, Frankfurt Am Main, Almanya, 30 Ağustos - 02 Eylül 2010, ss.341
- XXI. **A New Organometallic Route for the Synthesis of Sn-Doped ZnO nanocrystals and their Optoelectronic Properties**  
AKSU Y., Tsaroucha M., Driess M.  
GDCh (German Chemical Society)-Science Forum Chemistry, Frankfurt Am Main, Almanya, 30 Ağustos - 02 Eylül 2010, ss.340
- XXII. **Preparation and Characterization of Li-doped ZnO Nanocrystals Synthesized via a Single Source Molecular Precursor Approach**  
AKSU Y., Jana S., Driess M.  
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- XXIII. **Nanocrystalline Molybdenum-Doped Zinc Oxide from a Unique Molybdenum-Zinc Oxo Clusters and its Potential Application as a New TCO**  
AKSU Y., Ma J. G., Driess M.  
GDCh (German Chemical Society)-Science Forum Chemistry, Frankfurt Am Main, Almanya, 30 Ağustos - 02 Eylül 2010, ss.342
- XXIV. **Nanosized-ZnO-Based flexible FETs with High Mobility Prepared from Organometallic Single Source Precursors**  
AKSU Y., Driess M.  
GDCh (German Chemical Society)-Science Forum Chemistry, Frankfurt Am Main, Almanya, 30 Ağustos - 02 Eylül 2010, ss.343
- XXV. **ZnO supported on Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, TiO<sub>2</sub> and ZrO<sub>2</sub> for the Activation of Methane, Ethane and Propane**

- Arndt S., Uysal B., Otremba T., AKSU Y., Schomaecker R.  
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- XXVI. **Coupling of Methane with Li/MgO-Catalysts**  
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- XXVII. **Encoding tin-rich indium tin oxide-based nanoscaled materials with excellent optoelectronic properties via single source precursors**  
AKSU Y., Driess M.  
3rd EuCheMS (European Association for Chemical and Molecular Sciences)-Chemistry Congress, Nürnberg, Almanya, 20 Ağustos - 02 Eylül 2010, ss.34
- XXVIII. **Synthesis of heterobimetallic Sn/Zn-alkoxides and their controlled transformation to Amorphous Sn-doped ZnO or Zn<sub>2</sub>SnO<sub>4</sub> nanocrystals**  
Tsaroucha M., AKSU Y., Driess M.  
3rd EuCheMS (European Association for Chemical and Molecular Sciences)-Chemistry Congress, Nürnberg, Almanya, 20 Ağustos - 02 Eylül 2010, ss.34
- XXIX. **New Directions in Materials Synthesis for Energy-saving**  
Driess M., AKSU Y., Samedov K., Yıldız M., Heitz S., Jana S.  
3rd EuCheMS (European Association for Chemical and Molecular Sciences)-Chemistry Congress, Nürnberg, Almanya, 20 Ağustos - 02 Eylül 2010, ss.90
- XXX. **High quality MgO-based catalysts design by single source precursor approach**  
Heitz S., AKSU Y., Driess M.  
3rd EuCheMS (European Association for Chemical and Molecular Sciences)-Chemistry Congress, Nürnberg, Almanya, 20 Ağustos - 02 Eylül 2010, ss.68
- XXXI. **Nanoporous tin-rich indium tin oxide with improved electrical properties by templating a molecular single-source precursor for bioelectronic applications**  
AKSU Y., Thomas A., Driess M.  
3rd EuCheMS (European Association for Chemical and Molecular Sciences)-Chemistry Congress, Nürnberg, Almanya, 20 Ağustos - 02 Eylül 2010, ss.34
- XXXII. **Molybdenum in catalysis: From molecular model systems to bio-inspired and heterogeneous catalysts**  
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- XXXIII. **Doped-metal matrices: a new approach for the design of versatile catalytic materials**  
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- XXXIV. **Cubane-like Alkyl Zinc Alkoxides as excellent precursors for the preparation of nanosized ZnO-based Field-effect transistors (FETs) with high mobility at low temperature**  
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- XXXV. **Doped-metal matrices: a new approach for the design of versatile catalytic materials**  
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- XXXVII. **A Molecular Single-Source Precursor Approach to Synthesize Mesoporous Tin-rich Indium Tin Oxide for Photovoltaic Applications**  
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EUROMAT 2009 European Congress and Exhibition on Advanced Materials and Processes, Glasgow, Birleşik Krallık, 7 - 10 Eylül 2009, ss.22
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AKSU Y., Diğer Resmi Kurumlarca Desteklenen Proje, Synthesis of Indium Tin Oxide (ITO) Nanoparticles from Organometallic Precursors, 2006 - 2007

AKSU Y., AB Destekli Diğer Projeler, Chemical Modification of Nanoparticles for Applications in the Optoelectronic Industry, 2005 - 2006

AKSU Y., Diğer Resmi Kurumlarca Desteklenen Proje, Development of a procedure for the differential multidimensional chromatography (DMDLC) for proteomic analysis of models of neural apoptosis, 2002 - 2004

AKSU Y., Diğer Resmi Kurumlarca Desteklenen Proje, Synthesis, structure elucidation and use of alkaline earth metal complexes in the catalysis of carbonyl functionalized substrates, 2001 - 2003

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Mühendislik Fakültesi Uzmanlar Kurulu, Yönetim Kurulu Üyesi, 2013 - Devam Ediyor

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TÜBİTAK Projesi, Mart 2015

MATHCHEMPHYS, SCI Kapsamındaki Dergi, Şubat 2015

Sigma mühendislik ve Fen Bilimleri Dergisi, Hakemli Bilimsel Dergi, Şubat 2015

MATHCHEMPHYS, SCI Kapsamındaki Dergi, Ocak 2015

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TÜBİTAK Projesi, Ocak 2015

TÜBİTAK Projesi, Aralık 2014

MATHCHEMPHYS, SCI Kapsamındaki Dergi, Kasım 2014

TÜBİTAK Projesi, Kasım 2014

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TÜBİTAK Projesi, Temmuz 2014  
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## **Metrikler**

Yayın: 85  
Atıf (WoS): 703  
Atıf (Scopus): 788  
H-İndeks (WoS): 16  
H-İndeks (Scopus): 18

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44th World Chemistry Congress, IUPAC, Katılımcı, İstanbul, Türkiye, 2013  
XV. International Symposium on Relations Between Homogeneous and Heterogeneous Catalysis, Katılımcı, Berlin, Türkiye, 2011  
GDCh (German Chemical Society) 15th Meeting of the Wöhler-Association, Katılımcı, Freiburg, Almanya, 2010  
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## Ödüller

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