

## Assoc. Prof. MURAT KALOĞLU

### Personal Information

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### Education Information

Doctorate, Inonu University, Fen Bilimleri Enstitüsü, Kimya, Turkey 2011 - 2017

Post Graduate, Inonu University, Fen Bilimleri Enstitüsü, Kimya, Turkey 2008 - 2011

Under Graduate, Dicle University, Ziya Gökalp Eğitim Fakültesi, Kimya Öğretmenliği, Turkey 2003 - 2008

### Foreign Languages

English, B1 Intermediate

### Dissertations

Doctorate, Fonksiyonel Grup İçeren Metal-NHC Kompleksleri ve Özellikleri, Inonu University, Fen Bilimleri Enstitüsü, Kimya, 2017

Post Graduate, N-Heterosiklik Karben Katalizli Aminasyon, Inonu University, Fen Bilimleri Enstitüsü, Kimya, 2011

### Research Areas

Chemistry, Inorganic Chemistry, Catalysis, Metal Carbene Complexes, Organometallic Chemistry, Organic Chemistry, Chemistry of Heterocyclic Compounds, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Inonu University, Fen-Edebiyat Fakültesi, Kimya, 2020 - Continues

Research Assistant PhD, Inonu University, Fen-Edebiyat Fakültesi, Kimya, 2017 - Continues

Research Assistant, Inonu University, Fen-Edebiyat Fakültesi, Kimya, 2009 - 2017

### Courses

Kuantum Kimyası, Under Graduate, 2018 - 2019

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

- I. The direct C(sp<sup>2</sup>)-H functionalization and coupling of aromatic N-heterocycles with (hetero)aryl

**bromides by [PdX<sub>2</sub>(imidazolidin-2-ylidene)(Py)] catalysts**

KALOĞLU M., Slimani I., ÖZDEMİR N., GÜRBÜZ N., Hamdi N., ÖZDEMİR İ.

JOURNAL OF ORGANOMETALLIC CHEMISTRY, vol.951, 2021 (Journal Indexed in SCI)

- II. **The first use of [PdBr<sub>2</sub>(imidazolidin-2-ylidene)(pyridine)] catalysts in the direct C-H bond arylation of C2-substituted furan and thiophene**  
KALOĞLU M., Kaloglu N., ozdemir N., ÖZDEMİR İ.  
RESEARCH ON CHEMICAL INTERMEDIATES, vol.47, no.7, pp.2821-2843, 2021 (Journal Indexed in SCI)
- III. **Synthesis, characterization, crystal structure, Hirshfeld surface analysis, and theoretical study on a N-heterocyclic carbene salt and two NHC-palladium complexes**  
ÖZDEMİR N., KALOĞLU M., Kaloglu N., GÜRBÜZ N., ÖZDEMİR İ.  
INORGANIC AND NANO-METAL CHEMISTRY, 2021 (Journal Indexed in SCI)
- IV. **Palladium-PEPPSI-NHC Complexes Bearing Imidazolidin-2-Ylidene Ligand: Efficient Precatalysts for the Direct C5-Arylation of N-Methylpyrrole-2-Carboxaldehyde**  
KALOĞLU M., Kaloglu N., ÖZDEMİR İ.  
CATALYSIS LETTERS, 2021 (Journal Indexed in SCI)
- V. **The first used butylene linked bis(N-heterocyclic carbene)-palladium-PEPPSI complexes in the direct arylation of furan and pyrrole**  
KALOĞLU M., DEMİR DÜŞÜNCELİ S., ÖZDEMİR İ.  
JOURNAL OF ORGANOMETALLIC CHEMISTRY, vol.915, 2020 (Journal Indexed in SCI)
- VI. **The direct C4-arylation of 3,5-dimethylisoxazole with aryl bromides catalyzed by imidazolidin-2-ylidene based palladium-PEPPSI complexes**  
KALOĞLU M., ÖZDEMİR İ.  
INORGANICA CHIMICA ACTA, vol.504, 2020 (Journal Indexed in SCI)
- VII. **Palladium-carbene catalyzed direct arylation of five-membered heteroaromatics**  
KALOĞLU M., Kaloglu N., Ylirim I., ÖZDEMİR N., ÖZDEMİR İ.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1206, 2020 (Journal Indexed in SCI)
- VIII. **Well-defined PEPPSI-themed palladium-NHC complexes: synthesis, and catalytic application in the direct arylation of heteroarenes**  
KALOĞLU M., GÜRBÜZ N., Yildirim I., ÖZDEMİR N., ÖZDEMİR İ.  
APPLIED ORGANOMETALLIC CHEMISTRY, vol.34, no.2, 2020 (Journal Indexed in SCI)
- IX. **Half-sandwich ruthenium-carbene catalysts: Synthesis, characterization, and catalytic application in the N-alkylation of amines with alcohols**  
KALOĞLU M.  
INORGANICA CHIMICA ACTA, vol.498, 2019 (Journal Indexed in SCI)
- X. **Amine-fnctionalized silver and gold N-heterocyclic carbene complexes: Synthesis, characterization and antitumor properties**  
Kızrak U., ÇİFTÇİ O., ÖZDEMİR İ., GÜRBÜZ N., DEMİR DÜŞÜNCELİ S., KALOĞLU M., Mansour L., Zaghrouba F., Hamdi N., ÖZDEMİR İ.  
JOURNAL OF ORGANOMETALLIC CHEMISTRY, vol.882, pp.26-32, 2019 (Journal Indexed in SCI)
- XI. **Direct CH Bond Activation of Benzoxazole and Benzothiazole with Aryl Bromides Catalyzed by Palladium(II)-N-heterocyclic Carbene Complexes**  
KALOĞLU M., KALOGLUR N., ÖZDEMİR İ.  
CHINESE JOURNAL OF CHEMISTRY, vol.36, no.9, pp.837-844, 2018 (Journal Indexed in SCI)
- XII. **Synthesis of N-heterocyclic carbene-palladium-PEPPSI complexes and their catalytic activity in the direct C-H bond activation**  
KALOGLU N., KALOĞLU M., TAHIR M. N. , ARICI C., BRUNEAU C., DOUCET H., DIXNEUF P. H. , Cetinkaya B., ÖZDEMİR İ.  
JOURNAL OF ORGANOMETALLIC CHEMISTRY, vol.867, pp.404-412, 2018 (Journal Indexed in SCI)
- XIII. **Palladium(II)-N-Heterocyclic Carbene Complexes: Efficient Catalysts for the Direct C-H Bond Arylation of Furans with Aryl Halides**  
KALOĞLU M., ÖZDEMİR İ.

APPLIED ORGANOMETALLIC CHEMISTRY, vol.32, no.7, 2018 (Journal Indexed in SCI)

- XIV. **Palladium(II)-N-heterocyclic carbene-catalyzed direct C2-or C5-arylation of thiazoles with aryl bromides**  
KALOĞLU M., ÖZDEMİR İ.  
TETRAHEDRON, vol.74, no.23, pp.2837-2845, 2018 (Journal Indexed in SCI)
- XV. **Direct C-H Bond Arylation of C2-Blocked Pyrrole with Aryl Halides Using Palladium(II)-N-Heterocyclic Carbene Catalysts**  
KALOĞLU M., KALOĞLU N., ÖZDEMİR İ.  
CHEMISTRYSELECT, vol.3, no.20, pp.5600-5607, 2018 (Journal Indexed in SCI)
- XVI. **Ruthenium(II)-(p-cymene)-N-Heterocyclic Carbene Complexes for the N-Alkylation of Amine Using the Green Hydrogen Borrowing Methodology**  
KALOĞLU M., GÜRBÜZ N., SEMERİL D., ÖZDEMİR İ.  
EUROPEAN JOURNAL OF INORGANIC CHEMISTRY, no.10, pp.1236-1243, 2018 (Journal Indexed in SCI)
- XVII. **Silver-N-Heterocyclic Carbene Complexes: Synthesis, Characterization, and Antimicrobial Properties**  
KALOĞLU N., KALOĞLU M., ÖZDEMİR İ., GÜNAL S., ÖZDEMİR İ.  
JOURNAL OF THE CHINESE CHEMICAL SOCIETY, vol.64, no.4, pp.420-426, 2017 (Journal Indexed in SCI)
- XVIII. **PEPPSI-Type Palladium-NHC Complexes: Synthesis, Characterization, and Catalytic Activity in the Direct C5-Arylation of 2-Substituted Thiophene Derivatives with Aryl Halides**  
KALOĞLU M., ÖZDEMİR İ., DORCET V., BRUNEAU C., DOUCET H.  
EUROPEAN JOURNAL OF INORGANIC CHEMISTRY, no.10, pp.1382-1391, 2017 (Journal Indexed in SCI)
- XIX. **A theoretical insight for solvent effect on myoglobin assay of W(CO)(4)L-2 type novel complexes with DFT/TDDFT**  
ÜSTÜN E., Demir S., Coskun F., KALOĞLU M., ŞAHİN O., BÜYÜKGÜNGÖR O., ÖZDEMİR İ.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1123, pp.433-440, 2016 (Journal Indexed in SCI)
- XX. **Novel benzimidazol-2-ylidene carbene precursors and their silver(I) complexes: Potential antimicrobial agents**  
KALOĞLU M., KALOĞLU N., ÖZDEMİR İ., GÜNAL S., ÖZDEMİR İ.  
BIOORGANIC & MEDICINAL CHEMISTRY, vol.24, no.16, pp.3649-3656, 2016 (Journal Indexed in SCI)
- XXI. **The Influence of Imidazolylidene Ligands with Bulky Resorcinarenyl Substituents on Catalysts for Suzuki-Miyaura Coupling**  
KALOĞLU M., SEMERİL D., BRENNER E., MATT D., ÖZDEMİR İ., TOUPET L.  
EUROPEAN JOURNAL OF INORGANIC CHEMISTRY, no.7, pp.1115-1120, 2016 (Journal Indexed in SCI)
- XXII. **Copper-Catalysed Allylic Substitution Using 2,8,14,20-Tetrapentylresorcinarenyl-Substituted Imidazolium Salts**  
KALOĞLU M., SAHİN N., SEMERİL D., BRENNER E., MATT D., ÖZDEMİR İ., KAYA C., TOUPET L.  
EUROPEAN JOURNAL OF ORGANIC CHEMISTRY, vol.2015, no.33, pp.7310-7316, 2015 (Journal Indexed in SCI)
- XXIII. **N-Heterocyclic carbene-palladium catalysts for the direct arylation of pyrrole derivatives with aryl chlorides**  
ÖZDEMİR İ., GÜRBÜZ N., KALOĞLU N., DOĞAN O., KALOĞLU M., BRUNEAU C., DOUCET H.  
BEILSTEIN JOURNAL OF ORGANIC CHEMISTRY, vol.9, pp.303-312, 2013 (Journal Indexed in SCI)
- XXIV. **N-Heterocyclic Carbenes: Useful Ligands for the Palladium-Catalysed Direct C5 Arylation of Heteroaromatics with Aryl Bromides or Electron-Deficient Aryl Chlorides**  
ÖZDEMİR İ., GÖK Y., Ozeroglu O., KALOĞLU M., DOUCET H., BRUNEAU C.  
EUROPEAN JOURNAL OF INORGANIC CHEMISTRY, no.12, pp.1798-1805, 2010 (Journal Indexed in SCI)

## Refereed Congress / Symposium Publications in Proceedings

- I. **N-Heterocyclic Carbene Based Ruthenium-Catalyzed Direct Amination of Alcohol**  
ÖZDEMİR İ., KALOĞLU M., GÜRBÜZ N.

8nd Symposium on AES Metal Mediated Efficient Organic Synthesis, İzmir, Turkey, 07 September 2017 - 10

September 2014, pp.79

- II. **Pd-PEPPSI-Type N-Heterocyclic Carbene Complexes: Synthesis, Characterization and Catalytic Activity in The Direct Arylation Reactions**  
KALOĞLU M., ÖZDEMİR İ., DOUCET H., BRUNEAU C.  
6. Ulusal Kataliz Kongresi, Bursa, Turkey, 27 - 30 April 2016, pp.1
- III. **Synthesis Characterization and Catalytic Activity in The Direct Arylation Reactions**  
KALOĞLU M., ÖZDEMİR İ., DOUCET H., BRUNEAU C.  
NCC6 - The 6th Catalysis Conference, Bursa, Turkey, 27 - 30 April 2016
- IV. **N-Heterocyclic Carbene Based Ruthenium-Catalyzed Direct Amination of Alcohol**  
ÖZDEMİR İ., KALOĞLU M., GÜRBÜZ N.  
8th Asian-European Symposium on Metal-Mediated Efficient Organic Synthesis, İzmir, Turkey, 7 - 10 September 2014, pp.79
- V. **N-Heterocyclic carbene-palladium Catalyzed Biaryl Coupling by Direct C-H Activation**  
KALOĞLU M., ÖZDEMİR İ., GÜRBÜZ N., DOUCET H., BRUNEAU C., DIXNEUF P. H.  
2nd International Symposium on C-H Activation, Rennes, France, 30 June - 03 July 2014, pp.1
- VI. **N-Heterocyclic Carbene-Palladium Catalyzed Biaryl Coupling by Direct C-H Activation**  
KALOĞLU M., ÖZDEMİR İ., GÜRBÜZ N., DOUCET H., BRUNEAU C., DIXNEUF P. H.  
2nd International Symposium on C-H Activation, Rennes, France, 30 June - 03 July 2014, pp.121
- VII. **N-Heterocyclic Carbene-Palladium Catalyzed Biaryl Coupling by Direct C-H Activation**  
KALOĞLU M., ÖZDEMİR İ., GÜRBÜZ N., DOUCET H., BRUNEAU C., DIXNEUF P. H.  
2nd International Symposium on C-H Activation, Rennes, France, 30 June - 03 July 2014, pp.121
- VIII. **Heteroatom İçeren Aromatik Bileşiklerin Pd-NHC Katalizli Arilasyonu**  
KALOĞLU M., ÖZDEMİR İ., GÜRBÜZ N.  
5th National Catalysis Conference, Adana, Turkey, 23 - 26 April 2014, pp.92
- IX. **Palladium-catalyzed Suzuki reaction of aryl chlorides in aqueous media using carbene ligands**  
KALOĞLU M., KALOĞLU M., ÖZDEMİR İ.  
Second International Green Catalysis Symposium & Advanced School on Green Chemistry, Rennes, France, 2 - 04 April 2014, pp.53
- X. **Pd-NHC Complexes As a Catalyst For C-N Bond Formation**  
KALOĞLU M., ÖZDEMİR İ.  
44th World Chemistry Congress, İstanbul, Turkey, 11 - 16 August 2013
- XI. **New Photoactivatable CO-Releasing Molecules: Molybdenum Carbonyl Complexes with Benzimidazole Ligands**  
ÜSTÜN E., DEMİR DÜŞÜNCELİ S., KALOĞLU M., COŞKUN F., SCHATZSCHNEIDER U.  
Medicinal Redox Inorganic Chemistry Conference, Erlangen, Germany, 20 - 22 July 2013, pp.43
- XII. **Yeni Ru-NHC Komplekslerinin Sentezi**  
KALOĞLU M., ÖZDEMİR İ., GÜRBÜZ N.  
IV. Ulusal Anorganik Kimya Kongresi, Tokat, Turkey, 30 May - 02 June 2013, pp.96
- XIII. **Sübstitye Benzimidazol Grubu İçeren Pd-NHC Komplekslerinin Sentezi**  
KALOĞLU M., ÖZDEMİR İ.  
IV. Ulusal Anorganik Kimya Kongresi, Tokat, Turkey, 30 May - 02 June 2013, pp.97
- XIV. **Potential of palladium(II) and Silver(I) complexes as anti-cancer drugs on prostat cancer cell line**  
ÇİFTÇİ O., BAŞAK N., KALOĞLU M., ŞAHİN F., ÖZDEMİR İ.  
5th International congress on nutrition and cancer, Elazığ, Turkey, 9 - 11 September 2012, pp.35
- XV. **Yeni Benzimidazolyum Tuzlarının Sentezi ve Katalitik Uygulamaları**  
KALOĞLU M., GÜRBÜZ N., ÖZDEMİR İ., CETINKAYA B.  
25. Uluslar Arası Katılımlı Ulusal Kimya Kongresi, Erzurum, Turkey, 27 June - 02 July 2011
- XVI. **Sübstitye Benzimidazolyum Tuzlarının Sentezi ve C-C Bağ Oluşumundaki Katalitik Aktivitelerinin İncelenmesi**  
KALOĞLU M., ÖZDEMİR İ., CETINKAYA B.  
Organometalik Kimya ve Kataliz Çalıştayı, Malatya, Turkey, 16 - 17 May 2010, pp.34

## XVII. Sübstitüe Benzil Grubu İçeren NHC-Palladyum Kompleksleri

KALOĞLU M., ÖZDEMİR İ., CETINKAYA B.

II. Ulusal Anorganik Kimya Kongresi, Elazığ, Turkey, 16 - 19 May 2009, pp.161

## Supported Projects

Kaloğlu M., TÜBİTAK Project, Peppi Tipi Palladyum-N-Heterosiklik Karben Komplekslerinin Sentezi Ve Direkt C-H Bağlı Arilasyonundaki Katalitik Uygulamaları, 2019 - 2020

TÜBİTAK Project, İmidazolin ve Benzimidazol Türevi Ligandlar Bağlı Cr Mo ve W Metal Karbonillerin Sentezi Karakterizasyonu ve CO Salınımı Özellikleri, 2012 - 2015

TÜBİTAK Project, N heterocyclic carbene precursors NHC metal complexes and their applications in catalysis, 2010 - 2012

KALOĞLU M., TÜBİTAK Project, Pirkle-Tip Kiral Kolon Kromatografisi Yöntemiyle Bazı Kiral Amin Türevlerinin Rezolüsyonu, 2006 - 2007

## Edit Congress and Symposium Activities

6. Ulusal Kataliz Kongresi, Attendee, Bursa, Turkey, 2016

8th Asian-European Symposium on Metal-Mediated Efficient Organic Synthesis, Attendee, İzmir, Turkey, 2014

2nd International Symposium on C-H Activation, Attendee, Rennes, France, 2014

5th National Catalysis Conference, Attendee, Adana, Turkey, 2014

Second International Green Catalysis Symposium & Advanced School on Green Chemistry, Attendee, Rennes, France, 2014

44th World Chemistry Congress, Attendee, İstanbul, Turkey, 2013

Medicinal Redox Inorganic Chemistry Conference, Attendee, Erlangen, Germany, 2013

IV. Ulusal Anorganik Kimya Kongresi, Attendee, Tokat, Turkey, 2013

5th International congress on nutrition and cancer, Attendee, Elazığ, Turkey, 2012

25. Uluslararası Katılımlı Ulusal Kimya Kongresi, Attendee, Erzurum, Turkey, 2011

Organometalik Kimya ve Kataliz Çalıştayı, Attendee, Malatya, Turkey, 2010

II. Ulusal Anorganik Kimya Kongresi, Attendee, Elazığ, Turkey, 2009

## Citations

Total Citations (WOS):363

h-index (WOS):12

## Scholarships

2214/A Doktora Sırası Yurtdışı Araştırma Bursu, TÜBİTAK, 2014 - 2015