

## Asst. Prof. BAHAR İPEK TORUN

### Personal Information

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### Education Information

Doctorate, University Of Delaware, Mühendislik Fakültesi, Kimya Ve Biyomoleküler Mühendislik, United States Of America  
2011 - 2016

Post Graduate, Middle East Technical University, Faculty of Engineering, Department of Chemical Engineering, Turkey  
2008 - 2011

Under Graduate, Middle East Technical University, Faculty of Engineering, Department of Food Engineering, Turkey  
2004 - 2008

### Dissertations

Doctorate, H<sub>2</sub> ADSORPTION AND DIRECT METHANE CONVERSION TO METHANOL ON Cu-EXCHANGED ZEOLITES,  
University Of Delaware, Department Of Chemical And Biomolecular Engineering, 2016

Post Graduate, Photocatalytic carbon dioxide reduction in liquid media, Middle East Technical University, Faculty of  
Engineering, Department of Chemical Engineering, 2011

### Research Areas

Chemical Engineering and Technology, Process and Reactor Design, Catalysis and Catalytic Processes, Engineering and  
Technology

### Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Chemical Engineering, 2018  
- Continues

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Chemical Engineering, 2017  
- 2018

### Courses

Chemical Reaction Engineering, Under Graduate, 2019 - 2020

### Advising Theses

İpek Torun B., Synthesis of mesoporous [al]-[b]-zsm-5, -ssz-13 and -ssz-39 for methanol to olefins process, Post Graduate, B.KARAKAYA(Student), 2020

İpek Torun B., Üner D., HYDROGEN ADSORPTION ON CU (I)-EXCHANGED ZEOLITES, Post Graduate, İ.Altıparmak(Student), 2019

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

- **One-step synthesis of hierarchical [B]-ZSM-5 using cetyltrimethylammonium bromide as mesopore**  
Yalcin B. K. , İpek Torun B.  
TURKISH JOURNAL OF CHEMISTRY, vol.44, pp.841-858, 2020 (Journal Indexed in SCI)
- **H-2 adsorption on Cu(I)-ZSM-5: Exploration of Cu(I)-exchange in solution**  
Altıparmak İ., Karakaya B., Üner D., İpek Torun B.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.44, pp.18866-18874, 2019 (Journal Indexed in SCI)
- **H-2 Adsorption on Cu(I)-SSZ-13**  
İpek B., Pollock R. A. , Brown C. M. , Üner D., Lobo R. F.  
JOURNAL OF PHYSICAL CHEMISTRY C, vol.122, pp.540-548, 2018 (Journal Indexed in SCI)
- **Formation of [Cu<sub>2</sub>O<sub>2</sub>](<sup>2+</sup>) and [Cu<sub>2</sub>O](<sup>2+</sup>) toward C-H Bond Activation in Cu-SSZ-13 and Cu-SSZ-39**  
İpek B., Wulfers M. J. , Kim H., Goltl F., Hermans I., Smith J. P. , Booksh K. S. , Brown C. M. , Lobo R. F.  
ACS CATALYSIS, vol.7, pp.4291-4303, 2017 (Journal Indexed in SCI)
- **Catalytic conversion of methane to methanol on Cu-SSZ-13 using N<sub>2</sub>O as oxidant**  
İpek B., Lobo R. F.  
CHEMICAL COMMUNICATIONS, vol.52, pp.13401-13404, 2016 (Journal Indexed in SCI)
- **Rotational dynamics of organic cations in the CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> perovskite**  
Chen T., Foley B. J. , İpek B., TYAGI M., COPLEY J. R. D. , BROWN C. M. , Choi J. J. , Lee S.  
PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.17, pp.31278-31286, 2015 (Journal Indexed in SCI)
- **Conversion of methane to methanol on copper-containing small-pore zeolites and zeotypes**  
Wulfers M. J. , Teketel S., İpek B., Lobo R. F.  
CHEMICAL COMMUNICATIONS, vol.51, pp.4447-4450, 2015 (Journal Indexed in SCI)
- **CO<sub>2</sub> utilisation by photocatalytic conversion to methane and methanol**  
Uner D., OYMAK M. M. , İpek B.  
INTERNATIONAL JOURNAL OF GLOBAL WARMING, vol.3, pp.142-162, 2011 (Journal Indexed in SCI)

### Books & Book Chapters

- **On the Limits of Photocatalytic Water Splitting**  
İPEK TORUN B., ÜNER D.  
in: Water Chemistry, Dr. Murat Eyvaz, Editor, IntechOpen, pp.1-23, 2019
- **Artificial Photosynthesis from a Chemical Engineering Perspective**  
İPEK B., ÜNER D.  
in: Artificial Photosynthesis, Dr Mohammad Najafpour, Editor, Intech, Rijeka, pp.13-36, 2012

### Refereed Congress / Symposium Publications in Proceedings

- **Mesoporous SSZ-13 synthesis via accelerated hydrolysis and condensation of tetraethyl orthosilicate**  
İpek Torun B.  
2020 EFCATS Summer School, Piran, Slovenia, 15 - 19 September 2020

- **Continuous methanol production from methane on Cu-SSZ-39 and Cu-mordenite**  
Memioğlu Ö., İpek Torun B.
- 11th International Conference on Environmental Catalysis, Manchester, England, 7 - 09 September 2020  
**Synthesis of mesoporous [B]-ZSM-5 for Methanol to Propylene Reaction**  
Karakaya B., İpek Torun B.
- 14th European Congress on Catalysis, Aachen, Germany, 18 - 23 August 2019  
**H2 Storage at Ambient Temperature using Cu(I)-SSZ-39**  
İpek Torun B., Altıparmak İ., Üner D.
- 4. Uluslararası Hidrojen Teknolojileri Konferansı, Edirne, Turkey, 20 - 23 June 2019  
**Continuous Methanol Production from Methane Using N2O as Oxidant**  
İpek Torun B., Lobo R. F.
- 7. Ulusal Kataliz Kongresi, Denizli, Turkey, 9 - 12 September 2018, pp.142  
**Design of Mesoporous Small-Pore Zeolites for Direct Conversion of Methane to Methanol**  
Memioğlu Ö., İpek Torun B.
- 7. Ulusal Kataliz Kongresi, Denizli, Turkey, 9 - 12 September 2018, pp.55  
**MEZO-GÖZENEKLİ [B]-ZSM-5 ve [Al]-ZSM-5 SENTEZİ**  
Karakaya B., İpek B.
- 13. ULUSAL KİMYA MÜHENDİSLİĞİ KONGRESİ, Van, Turkey, 3 - 06 September 2018  
**Cl-free Cu(I)-exchange of Zeolites in Liquid Media**  
Altıparmak İ., İpek B.
- 9th Eastern Mediterranean Chemical Engineering Conference, Ankara, Turkey, 31 August - 02 September 2018  
**Synthesis of Mesoporous [B]-ZSM-5 and [Al]-ZSM-5 Using Soft Templates**  
Karakaya B., İpek B.
- 9th Eastern Mediterranean Chemical Engineering Conference, Ankara, Turkey, 31 August - 02 September 2018  
**Catalytic Methane Conversion to Methanol on Cu-SSZ-13**  
İPEK TORUN B., Lobo R. F.
- The 8th Tokyo Conference on Advanced Catalytic Science and Technology, Yokohama, Japan, 5 - 10 August 2018, pp.100  
**H2 Adsorption on Cu(I)-ZSM-5: Exploration of Cu(I)-exchange in Solution**  
Altıparmak İ., Karakaya B., İpek Torun B.
- 3rd International Hydrogen Technologies Congress, Antalya, Turkey, 15 - 18 March 2018, pp.36-39  
**[Cu2Oy]2 Formation in SSZ-13 for Methane Conversion to Methanol**  
İPEK B., Wulfers M. J. , Kim H., Goeltl F., Brown C. M. , Lobo R. F.
- 13th Nanoscience And Nanotechnology Conference, Antalya, Turkey, 22 - 25 October 2017  
**Oxidation Of Copper-exchanged Small-pore Zeolites And The Active Site For Methane Conversion**  
İPEK B., Wulfers M. J. , Smith J. P. , Booksh K. S. , Brown C. M. , Lobo R. F.
- International Chemical Congress Of Pacific Basin Societies, Honolulu, United States Of America, 15 - 20 December 2015  
**Oxidation Of Cu-ssz-13 And Active Site Characterization For Methane Conversion**  
İPEK B., Wulfers M. J. , Smith J. P. , Booksh K. S. , Brown C. M. , Lobo R. F.
- American Chemical Society National Meeting, Boston, United States Of America, 16 - 20 August 2015  
**Methane to Methanol Conversion on Cu-SSZ-13, -SSZ-16 and -SSZ-39**  
İPEK B., Wulfers M. J. , Teketel S., Smith J. P. , Booksh K. S. , Lobo R. F.
- North American Catalysis Society Meeting, Pittsburg, United States Of America, 14 - 19 June 2015  
**Methane to Methanol Conversion on Copper- Containing Small-Pore Zeolites**  
İPEK B., Wulfers M. J. , Teketel S., Lobo R. F.
- American Chemical Society National Meeting, Denver, United States Of America, 22 - 26 March 2015  
**Hydrogen Adsorption By Cu(1)-y, -ssz-13 And -zk-5**  
İPEK B., Brown C. M. , Lobo R. F.
- 17th International Zeolite Conference, Moskva, Russia, 7 - 12 July 2013

## Supported Projects

İPEK TORUN B., TUBITAK Project, Özgün Zeolitlerle Metanın Tek Aşamada Metanole Çevrilmesi, 2018 - Continues

İPEK TORUN B., ALTIPARMAK İ., KARAKAYA B., MEMİOĞLU Ö., Project Supported by Higher Education Institutions, Gaz depolama ve kataliz alanlarında kullanılmak üzere fonksiyonel zeolit sentezi, 2018 - 2019

İPEK TORUN B., KARAKAYA B., ALTIPARMAK İ., Project Supported by Higher Education Institutions, Mezo-gözenekli Al ve B içerikli zeolit sentezi, 2018 - 2019

## Scientific Refereeing

Turkish Journal of Chemistry, National Scientific Refreed Journal, January 2019

Turkish Journal of Chemistry, National Scientific Refreed Journal, November 2018

Chemistry Of Materials, Journal Indexed in SCI-E, August 2018

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Middle East Technical University, Turkey, June 2018

Türk Kimya Dergisi, National Scientific Refreed Journal, May 2018

ACS Catalysis, Journal Indexed in SCI-E, April 2018

## Tasks In Event Organizations

Üner D., Özdemir İ., Kılınçarslan R., Önsan Z. İ. , Akın A. N. , Erdem E., Karapınar E., Karakuş M., Uzun A., Tapan N. A. , et al., 7. Ulusal Kataliz Kongresi, Scientific Congress, Denizli, Turkey, Eylül 2018

Çalık P., Ayrancı Tansık İ., Büküşoğlu E., Bat E., İpek Torun B., ÜNER D., 9th Eastern Mediterranean Chemical Engineering Conference, Scientific Congress, Ankara, Turkey, Eylül 2018

## Citations

Total Citations (WOS):530

h-index (WOS):6