

Assoc. Prof. İNCİ AYRANCI TANSIK

Personal Information

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Education Information

Doctorate, University of Alberta, Mühendislik, Kimya ve Malzeme Mühendisliği, Canada 2007 - 2012

Undergraduate, Ankara University, Faculty Of Engineering, Department Of Chemistry Engineering, Turkey 2003 - 2007

Dissertations

Doctorate, Suspension of mixtures of solids in stirred tanks: problem definition and model identification, University of Alberta, Mühendislik Fakültesi, Kimya ve Malzeme Mühendisliği, 2012

Research Areas

Fluid Mechanics

Academic Titles / Tasks

Associate Professor, Middle East Technical University, Faculty Of Engineering, Department Of Chemical Engineering, 2021 - Continues

Assistant Professor, Middle East Technical University, Faculty Of Engineering, Department Of Chemical Engineering, 2016 - 2021

Lecturer, Middle East Technical University, Faculty Of Engineering, Department Of Chemical Engineering, 2014 - 2016

Courses

Chemical Engineering Laboratory I, Undergraduate, 2021 - 2022

Thermodynamics I, Undergraduate, 2014 - 2015, 2015 - 2016, 2017 - 2018, 2019 - 2020, 2020 - 2021

Chemical Engineering Laboratory III, Undergraduate, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019, 2019 - 2020, 2020 - 2021

FLUID MECHANICS, Undergraduate, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019, 2021 - 2022

PROCESS CONTROL, Undergraduate, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019, 2019 - 2020

Chemical Engineering Laboratory II, Undergraduate, 2016 - 2017, 2019 - 2020

Advising Theses

Ayrancı Tansık İ., Analysis of solids distribution in multimodal slurries at high concentrations., Doctorate, A.FIRAT(Student), Continues

Ayrancı Tansık İ., THE EFFECT OF FEDING CONDITIONS ON THE DROP SIZE OF PICKERING EMULSIONS IN AN UNBAFFLED STIRRED TANKS, Postgraduate, Y.Özdemir(Student), Continues

Ayrancı Tansık İ., A scale-up study of solid-liquid mixing tanks in terms of cloud height, Doctorate, E.ALTINTAŞ(Student), Continues

Ayrancı Tansık İ., Uludağ Y., ANALYSIS OF CLOUD HEIGHT IN CONCENTRATED SOLID-LIQUID MIXTURES USING ULTRASOUND DOPPLER VELOCIMETRY, Postgraduate, A.FIRAT(Student), 2021

Ayrancı Tansık İ., THE EFFECT OF PARTICLE PROPERTIES AND SOLIDS CONCENTRATION ON THE CLOUD HEIGHT IN A TALL STIRRED TANK, Postgraduate, E.Altıntaş(Student), 2021

Ayrancı Tansık İ., Parlaktuna M., The effect of experimental conditions on natural gas hydrate formation, Doctorate, S.LONGINOS(Student), 2020

Ayrancı Tansık İ., EFFECT OF HYDRODYNAMICS ON THE PRODUCTION OF PICKERING EMULSIONS IN UNBAFFLED STIRRED TANKS, Postgraduate, Ö.Demirdoğan(Student), 2019

Ayrancı Tansık İ., INVESTIGATION OF THE EFFECT OF HYDRODYNAMICS ON THE PRODUCTION OF PICKERING EMULSIONS IN BAFFLED STIRRED TANKS, Postgraduate, U.Kayode(Student), 2019

AYRANCI TANSIK İ., The effect of dispersed phase feed rate on the production of pickering emulsions, Postgraduate, D.DÖNMEZ(Student), 2018

Ayrancı Tansık İ., THE EFFECT OF PARTICLE SHAPE ON JUST-SUSPENDED SPEED OF MIXTURES OF SOLIDS AT HIGH CONCENTRATIONS, Postgraduate, B.Kütükücü(Student), 2017

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

- I. **Turbulence damping above the cloud height in suspensions of concentrated slurries in stirred tanks**
AYRANCI TANSIK İ., Kresta S. M.
AICHE JOURNAL, vol.67, no.7, 2021 (Journal Indexed in SCI)
- II. **Effect of dispersed phase feed time on the droplet size of Pickering emulsions produced in a stirred tank**
Donmez D., AYRANCI TANSIK İ.
AICHE JOURNAL, vol.66, no.6, 2020 (Journal Indexed in SCI)
- III. **The effect of hydrodynamic parameters on the production of Pickering emulsions in a baffled stirred tank**
Abdulrasaq U. K. , Ayrancı İ.
AICHE JOURNAL, vol.65, 2019 (Journal Indexed in SCI)
- IV. **Application of pressure gauge measurement method beyond its limits**
Kutukcu B., AYRANCI TANSIK İ.
CHEMICAL ENGINEERING RESEARCH & DESIGN, vol.141, pp.170-180, 2019 (Journal Indexed in SCI)
- V. **Applicability of the power model to mixed slurries with non-spherical particles and networking effect**
Kutukcu B., AYRANCI TANSIK İ.
CHEMICAL ENGINEERING RESEARCH & DESIGN, vol.138, pp.314-330, 2018 (Journal Indexed in SCI)
- VI. **Negative Impact of High Stirring Speed in Laboratory-Scale Three-Phase Hydrogenations**
Ayrancı İ., Kresta S., Shen J., Semagina N.
INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH, vol.53, no.46, pp.18091-18094, 2014 (Journal Indexed in SCI)
- VII. **Critical analysis of Zwietering correlation for solids suspension in stirred tanks**
Ayrancı İ., Kresta S. M.
CHEMICAL ENGINEERING RESEARCH & DESIGN, vol.92, pp.413-422, 2014 (Journal Indexed in SCI)
- VIII. **Prediction of just suspended speed for mixed slurries at high solids loadings**
Ayrancı İ., Ng T., Etchells A. W. , Kresta S. M.
CHEMICAL ENGINEERING RESEARCH & DESIGN, vol.91, no.2, pp.227-233, 2013 (Journal Indexed in SCI)
- IX. **Effect of geometry on the mechanisms for off-bottom solids suspension in a stirred tank**

Ayrancı İ., Machado M. B. , Madej A. M. , Derksen J. J. , Nobes D. S. , Kresta S. M.

CHEMICAL ENGINEERING SCIENCE, vol.79, pp.163-176, 2012 (Journal Indexed in SCI)

X. **Design rules for suspending concentrated mixtures of solids in stirred tanks**

Ayrancı İ., Kresta S. M.

CHEMICAL ENGINEERING RESEARCH & DESIGN, vol.89, pp.1961-1971, 2011 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **The Effect of Length of The Baffle on The Power Number**
Ayrancı Tansık İ., Gök G.
Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, vol.9, no.4, pp.1641-1648, 2020 (National Refreed University Journal)
- II. **The Effect of the Change of Impeller Speed on the Droplet Size Distribution of Pickering Emulsions in a Baffled Stirred Tank**
Abdulrasaq U. K. , Ayrancı Tansık İ.
Academic Platform-Journal of Engineering and Science, vol.8, no.1, pp.181-192, 2020 (Other Refereed National Journals)
- III. **The Effect of the Change of Impeller Speed on the Droplet Size Distribution of Pickering Emulsions in a Baffled Stirred Tank**
Abdulrasaq U. K. , Ayrancı İ.
Academic Platform-Journal of Engineering and Science, vol.8, no.1, pp.181-192, 2020 (Other Refereed National Journals)
- IV. **Psychrometric charts in color: An example of active learning for chemical engineering students and faculty members**
Kresta S., AYRANCI TANSIK İ.
EDUCATION FOR CHEMICAL ENGINEERS, vol.22, pp.14-19, 2018 (Journal Indexed in ESCI)

Refereed Congress / Symposium Publications in Proceedings

- I. **Tanecik Özelliklerinin ve Tanecik Konsantrasyonunun Bulut Yüksekliği Üzerindeki Etkilerinin Uzun Karıştırma Tanklarında İncelenmesi**
Altıntaş E., Ayrancı Tansık İ.
Ulusal Kimya Mühendisliği Kongresi (UKMK), Konya, Turkey, 10 - 12 June 2021, pp.35
- II. **Derişik Katı-Sıvı Karışımlarında Hız Profilinin Ultrasonik Doppler Hız Ölçüm Tekniği Kullanılarak Analizi ve Hız Profilinden Bulut Yüksekliğinin Tayini**
Taşkın A. F. , Uludağ Y., Ayrancı Tansık İ.
Ulusal Kimya Mühendisliği Kongresi (UKMK), Konya, Turkey, 10 - 12 June 2021, pp.33
- III. **Engelli Karıştırmalı Tanklarda Hidrodinamiğin Pickering Emülsiyonları Üretimi Üzerine Etkisi**
Abdulrasaq U. K. , Ayrancı Tansık İ.
13. Ulusal Kimya Mühendisliği Kongresi, Van, Turkey, 3 - 06 September 2018, pp.147
- IV. **ENGELLİ KARIŞTIRMALI TANKLARDA HİDRODİNAMİĞİN PICKERING EMÜLSİYONLARI ÜRETİMİ ÜZERİNE ETKİSİ**
Abdulrasaq U. K. , AYRANCI TANSIK İ.
13. Ulusal Kimya Mühendisliği Kongresi, Turkey, 3 - 06 September 2018
- V. **HİDRODİNAMİK KOŞULLARIN ENGELSİZ TANKLARDA ÜRETİLEN PICKERING EMÜLSİYONLARI ÜZERİNE ETKİSİ**
Demirdoğan Ö., Ayrancı Tansık İ.
13. Ulusal Kimya Mühendisliği Kongresi , Van, Turkey, 3 - 06 September 2018, pp.114-115
- VI. **JUST SUSPENDED SPEED OF MIXED SLURRIES WITH NON-SPHERICAL PARTICLES**
Kütükcü B., AYRANCI İ.

10th World Congress of Chemical Engineering, 1 - 05 October 2017

VII. **AN UNSTABILITY IN THE FORMATION OF PICKERING EMULSIONS**

AYRANCI Í, Fradette L.

NAMF (North American Mixing Forum), Mixing XXV, 26 June - 01 July 2016

VIII. **SUSPENDING MIXTURES OF SOLIDS IN STIRRED TANKS COMPLEXITIES AND SOLUTIONS**

Kresta S., AYRANCI Í.

10th European Congress of Chemical Engineering, 27 September - 01 October 2015

IX. **Limitations of the Zwietering correlation and the resulting form for a new approach based on power at just suspended speed**

Kresta S. M., AYRANCI Í.

15th European Conference of Mixing, 28 June - 03 July 2015

X. **Mixing of viscous liquids and large concentrations of spherical particles in stirred tanks**

Lassaigne M., BRUNO B., AYRANCI Í., FRADETTE L., FRANÇOIS B.

North American Mixing Forum (NAMF) Conference Mixing XXIV, 22 - 27 June 2014

XI. **Correlations for prediction of solids suspension in stirred tanks limitations of Zwietering correlation and path forward**

AYRANCI Í, Kresta S.

North American Mixing Forum (NAMF) Mixing XXIV, 22 - 27 June 2014

XII. **The effect of impeller configuration and impeller speed on the yield of three phase hydrogenation reactions**

AYRANCI Í, KRESTA S., SHEN J., SEMAGINA N.

23rd Canadian Symposium on Catalysis, 11 - 14 May 2014

XIII. **An unusual state during the production of solid stabilized emulsions in stirred tanks paste**

AYRANCI Í, FRADETTE L.

American Institute of Chemical Engineers (AIChE), 3 - 08 November 2013

XIV. **The effect of time on the form and stability of Pickering Emulsions**

AYRANCI Í, FRADETTE L.

9th World Congress of Chemical Engineering (WCCE9), 18 August - 23 November 2013

XV. **A design rule for prediction of the just suspended speed of mixed slurries**

AYRANCI Í, NG T., GARCÍA M., ETHELLES A. I., KRESTA S.

The American Institute of Chemical Engineers (AIChE) Annual Meeting, 16 - 21 October 2011

XVI. **Intentional Course Design and Outcomes Assessment Shifting the Curve in Material and Energy Balances Course**

AYRANCI Í, SUZANNE K.

The American Institute of Chemical Engineers (AIChE) Annual Meeting, 16 - 21 October 2011

XVII. **Bi modal no more shifting the curve in material and energy balances courses**

AYRANCI Í, Kresta S.

American Society for Engineering Education (ASEE) Annual Conference and Exposition, 26 - 29 June 2011

XVIII. **The effect of particle properties and solids loadings on suspension of mixed solids**

AYRANCI Í, KRESTA S.

The American Institute of Chemical Engineers (AIChE) Annual Meeting, 7 - 12 November 2010

XIX. **Effect of geometry on the mechanisms for off bottom solids suspension**

AYRANCI Í, MACHADO M., DERKSEN J. J., NOBES D. S., KRESTA S.

North American Mixing Forum (NAMF) Conference Mixing XXII, 20 - 25 June 2010

XX. **Energy Balances tools for structured problem solving and images for visual learners**

AYRANCI Í, KRESTA S.

The American Institute of Chemical Engineers (AIChE) Annual Meeting, 8 - 13 November 2009

XXI. **Mixed slurry behavior in stirred tanks with high solids loadings**

AYRANCI Í, DERKSEN J. J., KRESTA S.

8th World Congress of Chemical Engineering (WCCE8), 23 - 27 August 2009

XXII. **Extracting and organizing information from images structured problem solving tools**

Supported Projects

AYRANCI TANSIK İ., DEMİRDOĞAN Ö., Project Supported by Higher Education Institutions, PICKERING EMÜLSİYONLARININ ÜRETİMİ İÇİN KARIŞTIRMALI TANK TASARIMI, 2018 - Continues

AYRANCI TANSIK İ., TUBITAK Project, Doğal Gaz Hidratı Üretimi Reaktörü Tasarımı Ve Kinetik Analizi, 2017 - 2020

AYRANCI TANSIK İ., TUBITAK Project, Pickering Emülsiyonlarının Üretimi İçin Karıştırmalı Tank Tasarımı, 2017 - 2019

AYRANCI TANSIK İ., Dönmez D., Project Supported by Higher Education Institutions, Dağılan faz besleme hızının Pickering emülsiyonu oluşumuna etkisi, 2017 - 2019

AYRANCI TANSIK İ., Project Supported by Higher Education Institutions, KARIŞTIRMALI TANKLARDA PICKERING EMÜLSİYONLARININ KATASTROFİK FAZ EVRİLMESİ, 2016 - 2017

AYRANCI TANSIK İ., TUBITAK Project, İki farklı partikül fazından oluşan karışımların sıvı içindeki süspansiyonuna partikül şeklinin etkisi: minimum süspansiyon karıştırıcı hızı ve güç sayısı, 2015 - 2017

AYRANCI TANSIK İ., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2016

Scientific Refereeing

AICHE JOURNAL, Journal Indexed in SCI-E, April 2021

INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH, Journal Indexed in SCI-E, January 2021

CHEMICAL ENGINEERING SCIENCE, Journal Indexed in SCI-E, December 2020

CHEMICAL ENGINEERING SCIENCE, Journal Indexed in SCI-E, September 2020

INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH, Journal Indexed in SCI-E, December 2019

Canadian Journal Of Chemical Engineering, SCI Journal, November 2019

INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH, Journal Indexed in SCI-E, November 2019

Chemical Engineering Research & Design, Journal Indexed in SCI-E, October 2019

Aiche Journal, SCI Journal, September 2019

Industrial & Engineering Chemistry Research, SCI Journal, September 2019

Particulate Science And Technology, Journal Indexed in SCI-E, September 2019

Academic Platform-Journal of Engineering and Science, National Scientific Refreed Journal, June 2019

Chemical Engineering Research & Design, SCI Journal, January 2019

Chemical Engineering Research & Design, Journal Indexed in SCI-E, November 2018

Canadian Journal Of Chemical Engineering, Journal Indexed in SCI-E, May 2018

Chemical Engineering Research & Design, Journal Indexed in SCI-E, April 2018

Chemical Engineering Research & Design, Journal Indexed in SCI-E, February 2018

Citations

Total Citations (WOS):133

h-index (WOS):5