

## Assoc. Prof. Sevgi Aydın

### Personal Information

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### Education Information

Doctorate, Middle East Technical University, Fen Bilimleri Ens. , Kimya Öğretmenliği , Turkey 2007 - 2012

Post Graduate, Gazi University, Eğitim Fak. , Turkey 2000 - 2005

Under Graduate, Gazi University, Eğitim Fak. , Turkey 2000 - 2005

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Examination of chemistry teachers topic-specific nature of pedagogical content knowledge in electrochemistry and radioactivity, Middle East Technical University, Fen Bilimleri Enstitüsü , Ofma , 2012

### Research Areas

Social Sciences and Humanities, Education, Teacher Training in Science and Math. at Second. Sch. Lev.

### Academic Titles / Tasks

Associate Professor, Van Yüzüncü Yil University, Eğitim Fakültesi , Ofma , 2016 - Continues

Assistant Professor, Van Yüzüncü Yil University, Eğitim Fakültesi , Ofma , 2013 - 2016

Research Assistant, Middle East Technical University, Eğitim Fakültesi , Ofma , 2006 - 2012

### Professional Experience

#### Courses

Genel Kimya 2 , Under Graduate, 2015 - 2016, 2016 - 2017

FEN EĞİTİMİNDE YAPILAN ARAŞTIRMALAR, Post Graduate, 2016 - 2017

BİLİMİN DOĞASI, Under Graduate, 2015 - 2016

Fen Eğitimi Alanında Yapılan Araştırmalar, Post Graduate, 2015 - 2016

ÖĞRETİM TEKNOLOJİLERİ VE MATERYAL TASARIM, Under Graduate, 2015 - 2016

Özel Öğretim Yöntemleri-1 , Under Graduate, 2016 - 2017  
Çevre Kimyası , Under Graduate, 2015 - 2016  
Genel Kimya Laboratuvarı , Under Graduate, 2014 - 2015  
Genel Kimya 1 , Under Graduate, 2015 - 2016  
Bilim Doğası,Eğitimi ve Bu Alanda Yapılan Araştırmalar, Post Graduate, 2014 - 2015  
KİMYA EĞİTİMİNDE YANLIŞ KAVRAMLAR, Under Graduate, 2013 - 2014

## Advising Theses

Aydın S., THE EXAMINATION OF THE STEM ACTIVITIES PUBLISHED IN TURKEY BY THE USE OF THE CRITERIA FORMED IN THE LIGHT OF THE LITERATURE, Post Graduate, N.PULAT(Student), 2020  
Aydın S., 6.SINIF ÖĞRENCİLERİNİN MÜHENDİSLİK VE MÜHENDİS ALGILARININ MADDE VE ISI ÜNİTESİNDEKİ FeTeMM EĞİTİMİ SÜRECİNDE İNCELENMESİ, Post Graduate, Ö.ŞAPKAN(Student), 2019  
Aydın S., ÜLKEMİZDE FeTeMM ALANINDA YAPILMIŞ OLAN ÇALIŞMALARIN İÇERİK ANALİZİ, Post Graduate, V.TABAR(Student), 2018  
Aydın S., Bilimin Doğasının Lise Kimya Ders Kitaplarında Ele Alınışı, Post Graduate, S.TORTUMLU(Student), 2014  
Aydın S., Lise Öğrencilerinin Kimya Dersinde Öğrendikleri Konuları Günlük Hayat Olaylarını Açıklamakta Kullanabilme Seviyelerinin İncelenmesi, Post Graduate, B.DEMİRCİ(Student), 2014

## Jury Memberships

Post Graduate, Kimya Öğretmen adaylarının Temsilleri Kullanabilme Becerilerinin İncelenmesi , Yüzüncü Yıl Üniversitesi , August, 2018

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

- I. **Pre-Service Chemistry Teachers' Pedagogical Content Knowledge for Integrated STEM Development with LESMeR Model**  
Aydın S., Ekiz Kıran B., Öztay E. S.  
Chemistry Education Research And Practice, vol.1, pp.1-25, 2020 (Journal Indexed in SSCI)
- II. **The influence of a design-based elective STEM course on pre-service chemistry teachers' content knowledge, STEM conceptions, and engineering views**  
Aydın-Gunbatar S., Tarkin Çelikkıran A., Kutucu E. S. , Ekiz Kıran B.  
CHEMISTRY EDUCATION RESEARCH AND PRACTICE, vol.19, is.3, pp.954-972, 2018 (Journal Indexed in SCI)
- III. **Mediated Effects of Technology Competencies and Experiences on Relations among Attitudes Towards Technology Use, Technology Ownership, and Self Efficacy about Technological Pedagogical Content Knowledge**  
Yerdelen-Damar S., BOZ Y., Aydın-Gunbatar S.  
JOURNAL OF SCIENCE EDUCATION AND TECHNOLOGY, vol.26, is.4, pp.394-405, 2017 (Journal Indexed in SCI)
- IV. **Exploring the complexity of teaching: the interaction between teacher self-regulation and pedagogical content knowledge**  
Uzuntiryaki-Kondakci E., Demirdogen B., Akin F. N. , Tarkin A., Aydın-Gunbatar S.  
CHEMISTRY EDUCATION RESEARCH AND PRACTICE, vol.18, is.1, pp.250-270, 2017 (Journal Indexed in SCI)
- V. **Relations of Approaches to Learning with Perceptions of Learning Environment and Goal Orientations**  
Yerdelen-Damar S., Aydın S.  
EGİTİM VE BİLİM-EDUCATION AND SCIENCE, vol.40, is.179, pp.269-293, 2015 (Journal Indexed in SSCI)
- VI. **Looking at the Mirror: A Self-Study of Science Teacher Educators' PCK for Teaching Teachers**

Demirdogen B., Aydın S., Tarkin A.

EURASIA JOURNAL OF MATHEMATICS SCIENCE AND TECHNOLOGY EDUCATION, vol.11, is.2, pp.189-205, 2015  
(Journal Indexed in SSCI)

VII. **The nature and development of interaction among components of pedagogical content knowledge in practicum**

Aydın S., Demirdogen B., Akin F. N. , Uzuntiryaki-Kondakci E., Tarkin A.

TEACHING AND TEACHER EDUCATION, vol.46, pp.37-50, 2015 (Journal Indexed in SSCI)

VIII. **A science faculty's transformation of nature of science understanding into his teaching graduate level chemistry course**

Aydın S.

CHEMISTRY EDUCATION RESEARCH AND PRACTICE, vol.16, is.1, pp.133-142, 2015 (Journal Indexed in SCI)

IX. **The analysis of the changes in integration of nature of science into Turkish high school chemistry textbooks: is there any development?**

Aydın S., TORTUMLU S.

CHEMISTRY EDUCATION RESEARCH AND PRACTICE, vol.16, is.4, pp.786-796, 2015 (Journal Indexed in SCI)

X. **Turkish, Indian, and American Chemistry Textbooks Use of Inscriptions to Represent 'Types of Chemical Reactions'**

Aydın S., SINHA S., Izci K.

EURASIA JOURNAL OF MATHEMATICS SCIENCE AND TECHNOLOGY EDUCATION, vol.10, is.5, pp.383-393, 2014  
(Journal Indexed in SSCI)

XI. **The Integration of Nature of Science in the New Secondary Physics, Chemistry, and Biology Curricula**

Şardağ M., Aydın S., KALENDER N., TORTUMLU S., CIFTCI M., PERIHANOGLU S.

EGITIM VE BILIM-EDUCATION AND SCIENCE, vol.39, is.174, pp.233-248, 2014 (Journal Indexed in SSCI)

XII. **Examination of the topic-specific nature of pedagogical content knowledge in teaching electrochemical cells and nuclear reactions**

Aydın S., FRIEDRICHSEN P. M. , BOZ Y., HANUSCIN D. L.

CHEMISTRY EDUCATION RESEARCH AND PRACTICE, vol.15, is.4, pp.658-674, 2014 (Journal Indexed in SCI)

XIII. **Providing a Set of Research-Based Practices to Support Preservice Teachers' Long-Term Professional Development as Learners of Science Teaching**

Aydın S., Demirdogen B., Tarkin A., Kutucu S., Ekiz B., Akin F. N. , Tuysuz M., Uzuntiryaki E.

SCIENCE EDUCATION, vol.97, is.6, pp.903-935, 2013 (Journal Indexed in SSCI)

XIV. **Professional Journals as a Source of PCK for Teaching Nature of Science: An Examination of Articles Published in The Science Teacher (TST) (an NSTA Journal), 1995-2010**

Aydın S., Demirdöğen B., MUSLU N., HANUSCIN D. L.

Journal of Science Teacher Education, vol.24, is.6, pp.977-997, 2013 (Journal Indexed in SCI Expanded)

XV. **The nature of integration among PCK components: A case study of two experienced chemistry teachers**

Aydın S., BOZ Y.

CHEMISTRY EDUCATION RESEARCH AND PRACTICE, vol.14, is.4, pp.615-624, 2013 (Journal Indexed in SCI)

XVI. **Review of Studies Related to Pedagogical Content Knowledge in the Context of Science Teacher Education: Turkish Case**

Aydın S., BOZ Y.

KURAM VE UYGULAMADA EGITIM BILIMLERI, vol.12, is.1, pp.475-512, 2012 (Journal Indexed in SSCI)

XVII. **Are They Efficacious? Exploring Pre-Service Teachers' Teaching Efficacy Beliefs during the Practicum**

Aydın S., Demirdogen B., Tarkin A.

ASIA-PACIFIC EDUCATION RESEARCHER, vol.21, is.1, pp.203-213, 2012 (Journal Indexed in SSCI)

XVIII. **Examination of pre-service chemistry teachers' preferences for creating constructivist-learning environment**

Aydın S., Boz Y., SUNGUR S., Çetin G.

HACETTEPE UNIVERSITESI EGITIM FAKULTESI DERGISI-HACETTEPE UNIVERSITY JOURNAL OF EDUCATION,

vol.42, pp.36-47, 2012 (Journal Indexed in SSCI)

- XIX. **Factors that are Influential in Pre-service Chemistry Teachers' Choices of Instructional Strategies in the Context of Methods of Separation of Mixtures: A Case Study.**

Aydın S., BOZ N., BOZ Y.

ASIA-PACIFIC EDUCATION RESEARCHER, vol.19, is.2, pp.251-270, 2010 (Journal Indexed in SSCI)

- XX. **The Contribution of Constructivist Instruction Accompanied by Concept Mapping in Enhancing Pre-service Chemistry Teachers' Conceptual Understanding of Chemistry in the Laboratory Course**

Aydın S., Aydemir N., BOZ Y., Cetin-Dindar A., BEKTAŞ O.

JOURNAL OF SCIENCE EDUCATION AND TECHNOLOGY, vol.18, is.6, pp.518-534, 2009 (Journal Indexed in SCI)

## Articles Published in Other Journals

- I. **Making homemade indicator and strips: a STEM + activity for acid-base chemistry with entrepreneurship applications**  
Aydın S.  
Science Activities Projects and Curriculum Ideas in STEM Classrooms, vol.3, is.4, pp.1-10, 2020 (Journal Indexed in ESCI)
- II. **EXPERIENCED CHEMISTRY TEACHERS' SCIENCE PROCESS SKILLS (SPSs) DEVELOPMENT AND THEIR USE OF SPSs IN ACTIVITY PLANS**  
Aydın S., Kutucu E. S. , Tarkın Çelikkıran A., Ekiz Kıran B.  
TURKISH ONLINE JOURNAL OF EDUCATIONAL TECHNOLOGY, vol.2, pp.149-161, 2019 (Refereed Journals of Other Institutions)
- III. **KİMYA ÖĞRETMENLERİNİN FETEMM'E YÖNELİK ZİHİNSEL MODELLERİNDEKİ DEĞİŞİMİN HİZMET-İÇİ ÖĞRETMEN EĞİTİMİ BOYUNCA İNCELENMESİ**  
Kutucu E. S. , Aydın S.  
Uşak Üniversitesi Eğitim Araştırmaları Dergisi, vol.5, is.3, pp.22-42, 2019 (International Refereed University Journal)
- IV. **Türkiye'de Gerçekleştirilen STEM Araştırmalarının İçerik Analizi**  
Aydın S., TABAR V.  
Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi, vol.16, is.1, pp.1054-1083, 2019 (National Refreed University Journal)
- V. **Comparison of Learners' Problem Solving Approaches and Success in Stoichiometry**  
Aydın S., KALENDER N.  
Science Education International, vol.30, is.3, pp.169-180, 2019 (International Refereed University Journal)
- VI. **ELMANIN KARARMASININ ENGELLENMESİ: BİR FeTeMM ETKİNLİĞİ**  
Aydın S.  
Araştırma Temelli Etkinlik Dergisi, vol.8, pp.99-110, 2018 (Other Refereed National Journals)
- VII. **Kimya Öğretmen Adaylarının FeTeMM Uygulamaları Hakkındaki Görüşlerinin İncelenmesi**  
Tarkın Çelikkıran A., Aydın S.  
Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi, vol.14, is.1, pp.1624-1656, 2017 (National Refreed University Journal)
- VIII. **A Closer Examination of TPACK-Self-efficacy Construct: Modeling Elementary Pre-service Science Teachers' TPACK-Self efficacy**  
Aydın S., Boz Y., Yerdelen Damar S.  
e-İlköğretim Online (elektronik), vol.16, is.3, pp.917-934, 2017 (Other Refereed National Journals)
- IX. **Learning to Teach: Graduate Assistants' Expedition into Teaching Teachers**  
Aydın S., HANUSCIN D. L.  
Yükseköğretim Dergisi (Journal of Higher Education), vol.3, is.3, pp.129-141, 2013 (Refereed Journals of Other Institutions)
- X. **Secret in the Margins: Rutherford's Gold Foil Experiment**

Aydın S., HANUSCIN D. L.

The Science Teacher, vol.78, is.7, pp.56-60, 2011 (Refereed Journals of Other Institutions)

**XI. Teachers' views related to the new science and technology curriculum: Ankara case.**

Aydın S., ÇAKIROĞLU J.

e-İlköğretim Online (elektronik), vol.9, is.1, pp.301-315, 2010 (Other Refereed National Journals)

## **Books & Book Chapters**

- I. Technology Trends in Science Teaching**  
Artun H. (Editor), Aydın S. (Editor), Günbatar M. S. (Editor)  
PEGEM AKADEMİ, Ankara, 2020
- II. Çağdaş Yaklaşımlarla Destekli Fen Öğretimi: Teoriden Uygulamaya Etkinlik Örnekleri**  
Artun H., Aydın S.  
Pegem Akademi Yayın Evi, Ankara, 2019
- III. OLGU BİLİM (FENOMENOLOJİK ARAŞTIRMA) YÖNTEMİ**  
Aydın S.  
in: Eğitimde Araştırma Yöntemleri, Özmen, H. & Karamustafaoğlu O., Editor, Pegem Akademi Yayın Evi, Ankara, pp.292-315, 2019
- IV. Öğretmenlik Mesleği ve Öğretmen Yetiştirmede Güncel Gelişmeler**  
Aydın S.  
in: EĞİTİM GİRİŞ, Doç. Dr. Mehmet ŞAHİN - Doç. Dr. Tufan AYTAÇ, Editor, Pegem Akademi Yayın Evi, Ankara, pp.277-291, 2019
- V. Fen, Teknoloji, Mühendislik ve Matematik (FeTeMM) Yaklaşımı ve FeTeMM'e Uygun Etkinlik Hazırlama Rehberi**  
Aydın S.  
in: Çağdaş Yaklaşımlarla Destekli Fen Öğretimi: Teoriden Uygulamaya Etkinlik Örnekleri, Artun H. & Aydın-Günbatar, S., Editor, Pegem Akademi Yayın Evi, Ankara, pp.2-23, 2019
- VI. PEDAGOJİK ALAN BİLGİSİ TEMELLİ ÖZEL ÖĞRETİM YÖNTEMLERİ DERSİ: TEORİDEN UYGULAMAYA**  
Aydın S.  
in: Teoriden Uygulamaya Pedagojik Alan Bilgisi, Uluçınar- Sağır Ş. , Editor, Pegem A, Ankara, pp.65-84, 2018
- VII. Kimya Öğretiminde Fen, Teknoloji, Mühendislik ve Matematik Uygulamaları**  
Aydın S., Tarkın Çelikkaran A., Demirdöğen B.  
in: Kimya Öğretimi: Öğretmen Eğitimcileri, Öğretmenler ve Öğretmen Adayları için İyi Uygulama Örnekleri, Ayas A., Sözbilir M., Editor, Pegem A, Ankara, pp.469-490, 2017
- VIII. Chemistry Teaching Method Course for Secondary Science Teacher Training: An Example from Turkey**  
Aydın S., DEMIRDOGEN B.  
in: Designing and Teaching the Secondary Science Methods Course An International Perspective, Sickel A.J., Witzig, S. B. , Editor, Sensepublishers, Boston, pp.129-148, 2017
- IX. Olgu Bilim Araştırması**  
Aydın S.  
in: Kuramdan Uygulamaya Eğitimde Bilimsel Araştırma Yöntemleri, Metin M., Editor, Pegem A Yayıncılık, Ankara, pp.287-311, 2016
- X. Using Pedagogical Content Knowledge in Teacher Education**  
Aydın S., DEMIRDOGEN B.  
in: A Guidebook of Good Practice for the Pre-Service Training of Chemistry Teachers, Iwona Maciejowska & Bill Byers, Editor, Drukarnia Scriptor, Krakow, pp.151-174, 2015
- XI. BASİT MALZEMELER KULLANILARAK KİMYA ÖĞRETİM ETKİNLİKLERİ GELİŞTİRME VE KULLANMA**  
Aydın S., Tarkın A.  
in: Kimya Öğretimi: Öğretmen Eğitimcileri, Öğretmenler ve Öğretmen Adayları İçin İyi Uygulama Örnekleri, Ayas, A.

## Refereed Congress / Symposium Publications in Proceedings

- I. **The Examination of Experienced Chemistry Teachers' Science Process Skills' Development through Professional Development**  
Aydın S., Kutucu E. S. , Tarkın Çelikkıran A., Ekiz Kıran B.  
INTE-2019, Prag, Czech Republic, 3 - 05 July 2019, pp.724-729
- II. **Dünyanın Farklı Ülkelerindeki Kimya Programlarının Mühendislik Bileşenleri Yönünden İncelenmesi**  
Ekiz Kıran B., Aydın S., Kutucu E. S.  
UKEK 2019, Ankara, Turkey, 2 - 05 May 2019, pp.82
- III. **Evaluation of a professional development program: STEM education and applications for chemistry teachers**  
Tarkın Çelikkıran A., Ekiz Kıran B., Aydın S., Kutucu E. S.  
The 28th International Conference on Educational Sciences, Ankara, Turkey, 25 - 28 April 2019, pp.1255-1262
- IV. **Kimya Öğretmenlerinin Sorgulayıcı Araştırmaya Dayalı Etkinliklere Yönelik Görüşleri**  
Kutucu E. S. , Tarkın Çelikkıran A., Ekiz Kıran B., Aydın S.  
13. Ulusal Fen Bilimleri ve Matematik Alanları Eğitimi Kongresi, Denizli, Turkey, 4 - 06 October 2018, pp.1
- V. **Effectiveness of STEM Course on Pre-service Chemistry Teachers' Content Knowledge**  
Aydın S., Kutucu E. S. , Tarkın Çelikkıran A., Ekiz Kıran B.  
European Conference On educational Research, Bolzano, Italy, 3 - 04 September 2018, pp.35-36
- VI. **Examining Pre-service Chemistry Teachers' Development of Lesson Planning through Topic-specific Chemistry Teaching Method Course**  
Aydın S., Tarkın Çelikkıran A.  
European Conference On educational Research, Bolzano, Italy, 3 - 04 September 2018, pp.25-26
- VII. **Pre-service Chemistry Teachers' Science-Technology-Engineering-Mathematics (STEM) Conceptions and Views on Implementation of STEM**  
Kutucu E. S. , Tarkın Çelikkıran A., Ekiz Kıran B., Aydın S.  
Educational Researches and Publications Associations(ERPA), İstanbul, Turkey, 28 June - 01 July 2018, pp.1
- VIII. **How Should PCK for STEM be developed in Pre-service Teacher Education? Lessons Learned from an Elective STEM Course**  
Aydın S., Kutucu E. S. , Tarkın Çelikkıran A., Ekiz Kıran B.  
27th International Conferences on Educational Sciences, Antalya, Turkey, 18 - 22 April 2018, pp.3346-3347
- IX. **Providing Science, Technology, Engineering, And Mathematics (stem) Applications For Pre-service Chemistry Teachers: An Example Of A Stem Application Course**  
Kutucu E. S. , Tarkın Çelikkıran A., Ekiz Kıran B., Aydın S.  
27th ICES, Antalya, Turkey, 18 - 22 April 2018, pp.199
- X. **Investigating the Effect of a STEM Course on Pre-service Chemistry Teachers' Views on Engineering**  
Ekiz Kıran B., Aydın S., Kutucu E. S. , Tarkın Çelikkıran A.  
27th International Conferences on Educational Sciences, Antalya, Turkey, 18 - 22 April 2018, pp.3295-3296
- XI. **Preservice Chemistry Teachers'Views on STEM Activities**  
Tarkın Çelikkıran A., Ekiz Kıran B., Aydın S., Kutucu E. S.  
27th International Conferences on Educational Sciences, Antalya, Turkey, 18 - 22 April 2018, pp.3441-3442
- XII. **Content Analysis of Turkish STEM Reserach: Looking at the Big Picture**  
TABAR V., Aydın S.  
27th ICES, Antalya, Turkey, 18 - 22 April 2018, pp.227
- XIII. **The Analysis Of Teacher and Textbook Questions In Gases Topic: Question-Answer Relationship Framework**  
Aydın S., TABAR V., Gökçe C.  
26th International Conference on Educational Sciences, Antalya, Turkey, 20 - 23 April 2017, pp.1992-1993

- XIV. **Pre-Service Chemistry Teachers' Views About Topic- and Domain-Specific Teaching Method Course**  
Aydın S.  
26th International Conference on Educational Sciences, Antalya, Turkey, 20 - 23 April 2017, pp.1984-1985
- XV. **Changes In Pre-Service Chemistry Teachers' Teaching Efficacy Beliefs Through Topic- and Domain Specific Teaching Methods Courses**  
Tarkın A., Aydın S.  
26th International Conference on Educational Sciences, Antalya, Turkey, 20 - 23 April 2017, pp.2002-2003
- XVI. **Kimya derslerinde sorulan soruların bilişsel düzey ve hedef davranışlar açısından değerlendirilmesi**  
Tarkın A., Aydın S., GÖKÇE C., BAĞ E., ÖZDEMİR H., KILIÇ S.  
12. Ulusal fen ve Matematik Alanları Eğitimi Kongresi, Trabzon, Turkey, 28 - 30 September 2016, pp.191
- XVII. **Exploring Preservice Teachers Use of Self-Regulatory Processes in their Instructions**  
UZUNTIRYAKI-KONDAKCI E., DEMIRDOGEN B., AKIN F. N. , Tarkın A., Aydın S.  
EARLI SIG 11 Conference 2016: Diversity and Inclusion as a Challenge for Teacher Education, Zürich, Switzerland, 20 - 22 June 2016, pp.1
- XVIII. **Examination of problem solving skills of learners from different level of education in chemistry**  
Aydın S.  
12th International Congress of Qualitative Inquiry (ICQI), Urbana, United States Of America, 18 - 21 May 2016, pp.1
- XIX. **Examination of elementary science teacher guidebooks by the use of PCK framework**  
Aydın S.  
Budapeşte, Hungary, 7 - 11 September 2015, pp.1
- XX. **Modeling Elementary Science Teachers' TPACK**  
Aydın S., BOZ Y., Yerdelen Damar S.  
88th NARST Annual International Conference,, Chicago, United States Of America, 11 - 14 April 2015, pp.1
- XXI. **The relationship between preservice teacher self-regulation and PCK**  
Tarkın A., UZUNTIRYAKI-KONDAKCI E., AKIN F. N. , DEMIRDOGEN B., Aydın S.  
NARST, Chicago, United States Of America, 11 - 14 April 2015, pp.469
- XXII. **Modeling Relations of Attitudes towards Technology Use, Technology Competencies, Ownership, and Experiences to TPACK-Self Efficacy.**  
Yerdelen Damar S., Aydın S., BOZ Y.  
88th NARST Annual International Conference,, Chicago, United States Of America, 11 - 14 April 2015, pp.2
- XXIII. **Bir kimya profesörünün Bilimin doğası ile ilgili bilgisi ve deneylerini yüksek lisans kimya dersine yansıtması**  
Aydın S.  
XI. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, Adana, Turkey, 11 - 14 September 2014, pp.30
- XXIV. **The examination of high school students' achievement in daily-life chemistry and attitudes toward daily-life chemistry.**  
Aydın S., Demirci B.  
European Conference on Educational Research (ECER), Porto, Portugal, 1 - 05 September 2014, pp.102
- XXV. **The Examination of Hands-on Activities in High School Chemistry Textbooks by the Use of Features of Inquiry. International Congress of Educational Research.**  
Aydın S., Mertüüz S., Karakuş T., ÖZTÜRK M.  
VI. International Congress of Educational Research, Ankara, Turkey, 5 - 08 June 2014, pp.36
- XXVI. **Nature and Development of Interplay among Pre-service teachers' PCK components in Mentoring-enriched PCK-based Practicum**  
DEMIRDOGEN B., Aydın S., AKIN F. N. , UZUNTIRYAKI-KONDAKCI E.  
National Association For Research in Science Teaching, Pittsburg, United States Of America, 30 March - 02 April 2014, pp.88
- XXVII. **Growing a garden with water: Enriching the teaching practice course with mentoring and explicit PCK use**  
Aydın S., Tarkın A., Demirdöğen B., UZUNTIRYAKI-KONDAKCI E.  
European Conference on Educational Research, İstanbul, Turkey, 9 - 13 September 2013, pp.12

- XXVIII. **A Closer Look at the Influence of Context on Experienced Teachers' Pedagogical Content Knowledge**  
Aydın S.  
European Conference on Educational Research (ECER), İstanbul, Turkey, 9 - 13 September 2013, pp.51
- XXIX. **Development of Pre-Service Chemistry Teachers' Science Teaching Orientations in Practice Teaching Course**  
DEMIRDOĞEN B., Tarkın A., Aydın S., UZUNTIRYAKI-KONDAKCI E.  
European Conference on Educational Research (ECER), İstanbul, Turkey, 9 - 13 September 2013, pp.78
- XXX. **Development of creativity in pre-school teacher candidates and its reflection on their professional works**  
Rakap A., Aydın S.  
European Conference on Educational Research (ECER), İstanbul, Turkey, 9 - 13 September 2013, pp.26
- XXXI. **Providing Meaningful Experience to Pre-Service Teachers: Mentoring Enriched PCK Based Practicum Course.**  
Tarkın A., Demirdöğen B., Aydın S., Ekiz Kıran B., Kutucu E. S. , Akın F. N. , Tüysüz M., Uzuntiryaki E.  
86th NARST Annual International Conference, Puerto Rico, United States Of America, 6 - 09 April 2013, pp.72
- XXXII. **Looking at the mirror: a self-study of prospective science teacher educators' pck for teaching teachers**  
Aydın S., DEMIRDOĞEN B., Tarkın A.  
86th NARST, Rio Grande, Puerto Rico, 6 - 09 April 2013, pp.45
- XXXIII. **Kimya Öğretmen Adaylarının Kimya Eğitime Yönelik Sorunlara Bakışı ve Çözüm Önerileri**  
Tüysüz M., Tarkın A., Kutucu E. S. , Ekiz Kıran B., Aydın S., Demirdöğen B., Uzuntiryaki E.  
10. Fen ve Matematik Alanları Eğitimi Kongresi, Niğde, Turkey, 27 - 30 June 2012, pp.303
- XXXIV. **Deneyimli Kimya Öğretmenlerinin Pedagojik Alan Bilgisinin Oluşmasına Yardımcı Olan Kaynaklar.**  
Aydın S., BOZ Y.  
10. Fen ve Matematik Alanları Eğitimi Kongresi, Niğde, Turkey, 27 - 30 June 2012, pp.253
- XXXV. **Comparison of Experienced Chemistry Teachers' Pedagogical Content Knowledge in Electrochemistry and Radioactivity**  
BOZ Y., Aydın S.  
National Association For Research in Science Teaching, Indianapolis, United States Of America, 25 - 28 March 2012, pp.32
- XXXVI. **Further Examination of Interplay between Pedagogical Content Knowledge Components**  
Aydın S., BOZ Y.  
National Association For Research in Science Teaching, Indianapolis, United States Of America, 25 - 28 March 2012, pp.44
- XXXVII. **Graduate assistants' journey toward learning to teach**  
Aydın S., HANUSCIN D. L.  
World Conference on New Trends in Science Education, Aydın, Turkey, 19 - 23 September 2011, pp.76
- XXXVIII. **A closer look at topic-specific nature of pedagogical content knowledge in secondary chemistry**  
Aydın S., FRIEDRICHSEN P. M. , HANUSCIN D. L. , Abell S.  
World Conference on New Trends in Science Education, Aydın, Turkey, 19 - 23 September 2011, pp.54
- XXXIX. **Needs Assessment for Teaching Assistants: What Do They Need to Develop Teaching Skills.**  
Aydın S., AKIN F. N. , Tarkın A.  
World Conference on New Trends in Science Education (WCNTSE), Aydın, Turkey, 19 - 23 July 2011, pp.47
- XL. **İyi Bir Kimya Eğitimcisi Ne Tür Bilgilere Sahip Olmalıdır?**  
AKIN F. N. , Tarkın A., Aydın S.  
II. Ulusal Kimya Eğitimi Kongresi, Erzurum, Turkey, 5 - 08 July 2011, pp.1
- XLI. **Öğretmen adaylarının mikro öğretim ile zenginleştirilmiş öğretmenlik uygulaması dersi hakkındaki görüşleri.**  
Aydın S., Tarkın A., Demirdöğen B.  
9. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, İzmir, Turkey, 23 - 25 September 2010, pp.1
- XLII. **Kimya öğretmen adaylarının özyeterlik inançları.**



- Tarkın A., Demirdöğen B., Aydın S.  
9. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, İzmir, Turkey, 23 - 25 September 2010, pp.1
- XLIII. **Kimya öğretmen adaylarının öğretmen yeterlikleri hakkındaki görüşleri.**  
Demirdöğen B., Aydın S., Tarkın A.  
9. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, İzmir, Turkey, 23 - 25 September 2010, pp.1
- XLIV. **Six Pre-service Teachers' Experience on Factors Influencing Choice of Instructional Strategies**  
Aydın S., BOZ Y.  
European Conference on Educational Research, Viyana, Austria, 25 - 30 September 2009, pp.48
- XLV. **Examination on Pre-Service and In-Service Teachers' Sense of Efficacy Beliefs.**  
Tarkın A., Aydın S., UZUNTIRYAKI-KONDAKCI E., Boz Y.  
ESERA, İstanbul, Turkey, 31 August - 04 September 2009, pp.71-75
- XLVI. **Effectiveness of a Course on Pre-Service Chemistry Teachers' Pedagogical Content Knowledge and Subject Matter Knowledge.**  
Aydın S., DEMIRDOĞEN B., Tarkın A., UZUNTIRYAKI-KONDAKCI E.  
ESERA, İstanbul, Turkey, 31 August - 04 September 2009, pp.59-69
- XLVII. **Pre-Service Science Teachers' Teaching Self-Efficacy Beliefs.**  
Aydın S., BOZ Y.  
Further Education in Balkan Countries, Konya, Turkey, 23 October - 26 August 2008, pp.907-914
- XLVIII. **Are Senior Pre-service Chemistry Teachers Aware of the Students' Misconceptions Related with Particulate Nature of Matter (PNM) in the Context of Gases?**  
Aydın S., BOZ Y.  
ECRICE, İstanbul, Turkey, 6 - 09 July 2008, pp.68
- XLIX. **What are the Pre-service Chemistry Teachers' misconceptions on acid-base concepts?.**  
BEKTAS O., CETIN-DINDAR A., BOZ Y., Aydın S.  
ECRICE, İstanbul, Turkey, 6 - 09 July 2008, pp.38
- L. **Senior Pre-service Chemistry Teachers' Misconceptions about Gases and their Knowledge of Learners' Misconceptions**  
Aydın S., BOZ Y.  
International conference on educational research (ICES), Gazimagusa, Turkey, 23 June - 25 August 2008, pp.10-15

## Supported Projects

Aydın S., Project Supported by Higher Education Institutions, Deneyimli kimya öğretmenlerinin Hizmetiçi eğitim programı süresince bilimsel süreç becerilerinin incelenmesi, 2019 - 2019

Tarkın Çelikkıran A., Aydın S., Öztay E. S. , Ekiz Kıran B., TUBITAK Project, Kimya Öğretmenlerine Yönelik Fetemm Eğitimi Ve Uygulamaları, 2018 - 2019

Aydın S., Project Supported by Higher Education Institutions, Fen-Teknoloji-Mühendislik ve Matematik Yaklaşımı (FeTeMM) Temelli Seçmeli Dersin Öğretmen Adaylarının Kimya Alan Bilgisine Etkisi, 2018 - 2018

Aydın S., Tarkın Çelikkıran A., Ekiz Kıran B., Kutucu E. S. , Project Supported by Higher Education Institutions, Kimya Öğretmen Adaylarının FeTeMM Eğitimi Boyunca Alan Bilgisi FeTeMM Öğretimi Yönelimi ve Farkındalıklarının İncelenmesi, 2017 - 2018

Ekiz Kıran B., Tüysüz M., Tarkın Çelikkıran A., Öztay E. S. , Aydın S., TUBITAK Project, Kimya Öğretmenlerine Yönelik Sorgulayıcı Araştırmaya Dayalı Öğretim Etkinlikleri Ve Uygulamaları, 2017 - 2018

Aydın S., TUBITAK Project, Sorgulayıcı Araştırmaya Dayalı Öğretim Etkinlikleri ve Uygulamaları, 2017 - 2018

Aydın S., Project Supported by Higher Education Institutions, Özel Öğretim Yöntemleri dersinin alan bilgisi ve modern yaklaşımlarla zenginleştirilmesi, 2016 - 2017

Tarkın Çelikkıran A., UZUNTIRYAKI KONDAKCI E., AKIN F. N. , Aydın S., DEMİRDÖĞEN B., Project Supported by Higher Education Institutions, Exploring Preservice Teachers Use of Self Regulatory Processes in their Instructions, 2016 - 2016

Aydın S., Project Supported by Higher Education Institutions, Öğretmen adaylarının tekno-pedagojik alan bilgileri seviyeleri, teknoloji kullanımları ve teknoloji kullanımlarına etki eden faktörlerin incelenmesi, 2014 - 2015

## Activities in Scientific Journals

Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi, Assistant Editor, 2015 - Continues  
FEN BİLİMLERİ ÖĞRETİMİ DERGİSİ, Committee Member, 2015 - 2017

## Scientific Refereeing

HACETTEPE ÜNİVERSİTESİ EĞİTİM FAKÜLTESİ DERGİSİ, National Scientific Refreed Journal, February 2021  
INTERNATIONAL JOURNAL OF SCIENCE EDUCATION, Journal Indexed in SSCI, January 2021  
EDUCATIONAL STUDIES, Journal Indexed in SSCI, October 2020  
INTERNATIONAL JOURNAL OF SCIENCE EDUCATION, Journal Indexed in SSCI, August 2020  
Fen Bilimleri Öğretimi Dergisi, Other Journals, June 2020  
Eurasian Journal of Educational Research, Other Indexed Journal, June 2020  
International Journal of Science Education , Journal Indexed in SSCI, March 2020  
Science Education, Journal Indexed in SSCI, November 2019  
Çağdaş Yönetim Bilimleri Dergisi, National Scientific Refreed Journal, October 2019  
Educational Studies, Journal Indexed in SSCI, October 2019  
International Journal of Science Education , Journal Indexed in SSCI, September 2019  
Journal of Science Teacher Education, Other Indexed Journal, August 2019  
YYÜ Eğitim Fakültesi Dergisi , National Scientific Refreed Journal, June 2019  
International Journal of Science Education , Journal Indexed in SSCI, June 2019  
FEN BİLİMLERİ ÖĞRETİMİ DERGİSİ, National Scientific Refreed Journal, April 2019  
TUBITAK Project, March 2019  
YYÜ Eğitim Fak Dergisi, National Scientific Refreed Journal, September 2018  
YYÜ Eğitim Fak Dergisi, National Scientific Refreed Journal, September 2018  
YYÜ Eğitim Fak Dergisi, National Scientific Refreed Journal, September 2018  
YYÜ Eğitim Fak Dergisi, National Scientific Refreed Journal, September 2018  
YYÜ Eğitim Fak Dergisi, National Scientific Refreed Journal, September 2018  
International Journal of Science Education , Journal Indexed in SSCI, August 2018  
Journal of Teacher Education, Journal Indexed in SSCI, May 2018  
Fen Bilimleri Öğretimi Dergisi , National Scientific Refreed Journal, April 2018  
Education & Science (Eğitim ve Bilim), Journal Indexed in SSCI, April 2018  
Chemistry Education: Reserach & Practice, Journal Indexed in SSCI, January 2018  
International journal of science education, Journal Indexed in SSCI, December 2017  
Chemistry Education Research and Practice, Journal Indexed in SSCI, December 2017  
International Journal of Science Education, Journal Indexed in SSCI, October 2017  
International Journal of Science Education, Journal Indexed in SSCI, October 2017  
Türk Eğitim Dergisi, National Scientific Refreed Journal, October 2017  
International Journal of Science Education, Journal Indexed in SSCI, June 2017  
Chemistry Education Research and Practice , Journal Indexed in SSCI, June 2017  
International journal of Science Education , Journal Indexed in SSCI, May 2017  
Teaching and Teacher Education, Journal Indexed in SSCI, April 2017  
Chemistry Education Research and Practice , Journal Indexed in SSCI, February 2017  
Educational Studies, Journal Indexed in SSCI, January 2017  
International Journal of science Education , Journal Indexed in SSCI, December 2016  
Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi, National Scientific Refreed Journal, November 2016  
Araştırma Temelli Etkinlik Dergisi (ATED), National Scientific Refreed Journal, July 2016  
Chemistry Education Research and Practice , Journal Indexed in SSCI, June 2016  
Eğitim ve Bilim (Education & Science), Journal Indexed in SSCI, March 2014  
Journal of Science Teacher Education , Other Indexed Journal, February 2014

Yüksek Öğretim Dergisi (Journal of Higher Education) , National Scientific Refreed Journal, April 2013

## **Scientific Research / Working Group Memberships**

FEAD, Fen Eğitimi Araştırmaları Derneği, Turkey, <http://fead.org.tr/main/>, 2012 - Continues

NSTA, National Science Teacher Association, United States Of America, [www.nsta.org](http://www.nsta.org), 2010 - Continues

## **Invited Congress and Symposium Activities**

27th International Conference on educational Sciences, Session Moderator, Antalya, Turkey, 2018

ICQI-12th International Congress of Qualitative Inquiry, Session Moderator, Illinois, United States Of America, 2016

## **Citations**

Total Citations (WOS):142

h-index (WOS):6

## **Scholarships**

Narst Scholarship, Other International Organizations, 2012 - Continues

ESERA Conference Scholarship, Other International Organizations, 2011 - Continues

ECER- 2010- Vienna Conferenference Scholarship, Other International Organizations, 2009 - Continues

## **Awards**

Aydın S., Bilim Akademisi Genç Bilim İnsanları Programı (BAGEP) 2019 Ödülü, Bilim Akademisi, April 2019

Aydın S., Research worth Reading, National Science Teachers Association (NSTA), April 2014