

Prof. MUSTAFA ŞAHMARAN

Personal Information

Office Phone: [+90 312 297 7328](tel:+903122977328)

Email: sahmaran@hacettepe.edu.tr

Web: <https://avesis.hacettepe.edu.tr/sahmaran>

Address: Hacettepe Üniversitesi, İnşaat Mühendisliği Bölümü 06800 Beytepe Ankara

Education Information

Doctorate, Middle East Technical University, Faculty Of Engineering, İnşaat Mühendisliği, Turkey 2002 - 2005

Foreign Languages

English, C1 Advanced

Research Areas

Civil Engineering, Building materials, Materials in Civil Engineering, Concrete Technology, Building Components and Materials, Composite materials, Material Mechanics, Applications of Insulation Materials, Engineering and Technology

Academic Titles / Tasks

Professor, Hacettepe University, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü, 2017 - Continues

Professor, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü, 2017 - 2017

Associate Professor, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü, 2013 - 2017

Associate Professor, Gaziantep University, Faculty Of Engineering, İnşaat Mühendisliği Bölümü (İngilizce), 2010 - 2013

Assistant Professor, Gaziantep University, Faculty Of Engineering, İnşaat Mühendisliği Bölümü (İngilizce), 2007 - 2010

Expert, University of Michigan, Mühendislik Fakültesi, İnşaat Ve Çevre Mühendisliği, 2006 - 2007

Research Assistant, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, 2002 - 2006

Research Assistant, Gaziantep University, Faculty Of Engineering, İnşaat Mühendisliği Bölümü (İngilizce), 1999 - 2002

Academic and Administrative Experience

Gaziantep Üniversitesi, Mühendislik Fakültesi, 2012 - 2013

Gaziantep Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü (İngilizce), 2009 - 2013

Gaziantep Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü (İngilizce), 2009 - 2013

Advising Theses

ŞAHMARAN M., YÜKSEK KARBONDİOKSİT KONSANTRASYONLU ORTAMLARDA ÇİMENTO BAĞLAYICILI KOMPOZİTLERDE HASARLARIN KENDİLİĞİNDEN İYİLEŞMESİ, Postgraduate, A.HAMIDZADEH(Student), 2018

ŞAHMARAN M., ÇEVİRİMSSEL EĞİLME YÜKLEMELERİ ALTINDA ÇİMENTO BAĞLAYICILI KOMPOZİTLERİN KENDİLİĞİNDEN ALGILAMA KABİLİYETİNİN DEĞERLENDİRİLMESİ, Postgraduate, O.ÖCAL(Student), 2018

ŞAHMARAN M., Nylon esaslı liflerin çimento bağlayıcılı kompozitlerin özellikleri üzerine etkileri, Doctorate, F.EMAMI(Student), 2017

ŞAHMARAN M., Nano malzemeler ile modifiye edilmiş yüksek performanslı hibrid lif donatılı betonlar, Doctorate, S.DEMİRHAN(Student), 2017

ŞAHMARAN M., Riskli yapıların tespit edilmesine ilişkin esaslar ile birinci ve ikinci aşama değerlendirme yöntemlerinin karşılaştırılması, Postgraduate, E.BAHŞI(Student), 2017

ŞAHMARAN M., Türkiye Afet Müdahale Hizmetleri Yönetmeliği çerçevesinde acil yıkım uygulama rehberinin geliştirilmesi, Postgraduate, H.ÖZKILIÇ(Student), 2017

ŞAHMARAN M., Kendiliğinden algılama kabiliyetine sahip çimento bağlayıcılı kompozitlerin büyük ölçekli yapısal kiriş elemanlarda performansları, Doctorate, M.HAROON(Student), 2017

ŞAHMARAN M., Özellikleri nano boyutta modifiye edilmiş yüksek hacimde uçucu kül içeren tasarlanmış çimento bağlayıcılı kompozitler, Postgraduate, Ü.EROL(Student), 2017

ŞAHMARAN M., The effect of nanosilica on the properties of pumice incorporated blended cements, Postgraduate, B.DÜNDAR(Student), 2016

ŞAHMARAN M., Multifunctional cementitious composites for damage- resistant highway structures, Doctorate, A.MAJEED(Student), 2016

ŞAHMARAN M., Türkiye inşaat yıkıntı atık yönetim sisteminin geliştirilmesi, Postgraduate, Ü.POYRAZ(Student), 2016

ŞAHMARAN M., Sürdürülebilir altyapılar için yeni nesil akıllı çimento bağlayıcılı kompozit malzemelerin geliştirilmesi, Doctorate, G.YILDIRIM(Student), 2016

ŞAHMARAN M., Nano malzemelerin çimento bağlayıcılı kompozitlerin mekanik özellikleri üzerine etkileri, Postgraduate, M.HATAM(Student), 2016

ŞAHMARAN M., Performance-based design of high performance fiber reinforced cementitious composites for repair of rigid pavement and other infrastructure, Doctorate, M.KASSIM(Student), 2016

ŞAHMARAN M., Detecting damage and self-healing in cementitious composites using electrical methods for protection of critical infrastructures, Doctorate, Ü.GÜLSÜM(Student), 2016

ŞAHMARAN M., Effects of different types of carbon based materials on electrical properties of cementitious composites, Postgraduate, O.ÖZTÜRK(Student), 2015

ŞAHMARAN M., Mevcut yapıların risk durumunun belirlenmesi için 6306 sayılı kanun kapsamında yer alan hızlı değerlendirme tekniğinin uygulanması, Postgraduate, Z.TOZLU(Student), 2015

ŞAHMARAN M., Çimento bağlayıcılı kompozitlerde kendiliğinden iyileşme kabiliyetinin tahribatsız test yöntemleri ile değerlendirilmesi, Postgraduate, B.TOLUNAY(Student), 2015

ŞAHMARAN M., INFLUENCE OF HYDRATED LIME ADDITION ON SELF-HEALING CAPABILITY OF HIGH VOLUME FLY ASH INCORPORATED CEMENTITIOUS COMPOSITES, Postgraduate, H.UNIS(Student), 2014

ŞAHMARAN M., EFFECT OF CHEMICAL ADDITION ON THE COMPRESSIVE STRENGTH OF SLAG-CEMENTS, Postgraduate, H.HAMA(Student), 2014

ŞAHMARAN M., Assessing the efficiency of pre-soaked expanded perlite usage incorporation on the self-healing ability of cementitious composites, Postgraduate, K.AHMED(Student), 2013

ŞAHMARAN M., Repeatability of self-healing in cementitious composites, Postgraduate, R.AZAD(Student), 2013

ŞAHMARAN M., Design of crack free, durable and ductile concrete for sustainable highway rigid pavement overlays, Doctorate, H.ERHAN(Student), 2013

ŞAHMARAN M., High early strength ductile cementitious composites with characteristics of low early age shrinkage, Postgraduate, Y.EMRE(Student), 2013

ŞAHMARAN M., Bond characteristics between high early strength engineered cementitious composites and substrates, Postgraduate, R.KHALİD(Student), 2013

ŞAHMARAN M., Ultra-thin engineered cementitious composites overlay systems for rehabilitation of rigid concrete pavements, Postgraduate, H.JASHAMİ(Student), 2012

ŞAHMARAN M., Dimensional stability of engineered cementitious composites, Doctorate, S.BAHADIR(Student), 2012

ŞAHMARAN M., Effect of internal curing caused by saturated lightweight aggregate on the properties of engineered cementitious composites, Postgraduate, K.SULAIMAN(Student), 2012

ŞAHMARAN M., Effects of different mineral admixtures on the self-healing ability of engineered cementitious composites, Postgraduate, G.YILDIRIM(Student), 2012

ŞAHMARAN M., Rheological properties of engineered cementitious composites containing fly ash, Postgraduate, Z.BİLİCİ(Student), 2011

ŞAHMARAN M., Effect of aggregate size and amount on the mechanical properties of engineered cementitious composites incorporating fly ash and slag, Postgraduate, M.TURHAN(Student), 2011

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Sodium glass liquid from glass waste as a user-friendly hardener in structural geopolymer systems**
Dadsetan S., Siad H., Lachemi M., Mahmoodi O., ŞAHMARAN M.
CEMENT & CONCRETE COMPOSITES, vol.130, 2022 (Journal Indexed in SCI)
- II. **Properties of geopolymers sourced from construction and demolition waste: A review**
Alhawat M., Ashour A., Yildirim G., ALDEMİR A., ŞAHMARAN M.
JOURNAL OF BUILDING ENGINEERING, vol.50, 2022 (Journal Indexed in SCI)
- III. **Development of ambient cured geopolymer binders based on brick waste and processed glass waste**
Dadsetan S., Siad H., Lachemi M., Mahmoodi O., ŞAHMARAN M.
ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH, 2022 (Journal Indexed in SCI)
- IV. **Rheological properties and compressive strength of construction and demolition waste-based geopolymer mortars for 3D-Printing**
İLCAN H., Sahin O., KUL A., YILDIRIM G., ŞAHMARAN M.
CONSTRUCTION AND BUILDING MATERIALS, vol.328, 2022 (Journal Indexed in SCI)
- V. **Shear behaviour of reinforced construction and demolition waste-based geopolymer concrete beams**
ALDEMİR A., AKDUMAN Ş., KOCAER Ö., AKTEPE R., ŞAHMARAN M., YILDIRIM G., Almahmood H., Ashour A.
JOURNAL OF BUILDING ENGINEERING, vol.47, 2022 (Journal Indexed in SCI)
- VI. **Optimized application of ternary brick, ceramic and concrete wastes in sustainable high strength geopolymers**
Mahmoodi O., Siad H., Lachemi M., Dadsetan S., ŞAHMARAN M.
JOURNAL OF CLEANER PRODUCTION, vol.338, 2022 (Journal Indexed in SCI)
- VII. **Optimization and characterization of geopolymer binders from ceramic waste, glass waste and sodium glass liquid**
Dadsetan S., Siad H., Lachemi M., Mahmoodi O., ŞAHMARAN M.
JOURNAL OF CLEANER PRODUCTION, vol.342, 2022 (Journal Indexed in SCI)
- VIII. **Role of inclusion size distribution of titanium dioxide on the nitrogen oxides reduction capability and microstructural characteristics of cementitious systems**
Bahsi E., Sahin O., Ilcan H., UZAL B., Gunal M. F. , YILDIRIM G., ŞAHMARAN M.
CONSTRUCTION AND BUILDING MATERIALS, vol.318, 2022 (Journal Indexed in SCI)
- IX. **The effect of chemical- versus microbial-induced calcium carbonate mineralization on the enhancement of fine recycled concrete aggregate: A comparative study**
Sonmez M., Ilcan H., Dundar B., YILDIRIM G., ERŞAN Y. Ç. , ŞAHMARAN M.
JOURNAL OF BUILDING ENGINEERING, vol.44, 2022 (Journal Indexed in SCI)
- X. **A review on the durability of concrete-to-concrete bond in recent rehabilitated structures**
Baloch W. L. , Siad H., Lachemi M., ŞAHMARAN M.
JOURNAL OF BUILDING ENGINEERING, vol.44, 2021 (Journal Indexed in SCI)
- XI. **Demountable connections of reinforced concrete structures: Review and future developments**
Figueira D., Ashour A., YILDIRIM G., ALDEMİR A., ŞAHMARAN M.
STRUCTURES, vol.34, pp.3028-3039, 2021 (Journal Indexed in SCI)
- XII. **Development of optimized binary ceramic tile and concrete wastes geopolymer binders for in-situ applications**
Mahmoodi O., Siad H., Lachemi M., Dadsetan S., ŞAHMARAN M.

JOURNAL OF BUILDING ENGINEERING, vol.43, 2021 (Journal Indexed in SCI)

- XIII. **Investigation of mechanical properties of high-performance hybrid fiber concretes adding nanomaterials using with coarse aggregate**
Oksuzer N., ANIL Ö., ALDEMİR A., ŞAHMARAN M.
STRUCTURES, vol.33, pp.2893-2902, 2021 (Journal Indexed in SCI)
- XIV. **Self-monitoring of flexural fatigue damage in large-scale steel-reinforced cementitious composite beams**
Çelik D. N. , YILDIRIM G., Al-Dahawi A., ULUGÖL H., Han B., ŞAHMARAN M.
Cement and Concrete Composites, vol.123, 2021 (Journal Indexed in SCI)
- XV. **Development and characterization of binary recycled ceramic tile and brick wastes-based geopolymers at ambient and high temperatures**
Mahmoodi O., Siad H., Lachemi M., Dadsetan S., ŞAHMARAN M.
CONSTRUCTION AND BUILDING MATERIALS, vol.301, 2021 (Journal Indexed in SCI)
- XVI. **Understanding the effect of nano/micro-structures on anti-impact of nano-boron nitride filled cementitious composites**
Wang J., Dong S., Li Z., ŞAHMARAN M., Ding S., Han B.
CONSTRUCTION AND BUILDING MATERIALS, vol.298, 2021 (Journal Indexed in SCI)
- XVII. **Experimental investigations on the structural behaviour of reinforced geopolymer beams produced from recycled construction materials**
AKDUMAN Ş., Kocaer O., ALDEMİR A., ŞAHMARAN M., YILDIRIM G., Almahmood H., Ashour A.
JOURNAL OF BUILDING ENGINEERING, vol.41, 2021 (Journal Indexed in SCI)
- XVIII. **Effects of self-healing on the microstructure, transport, and electrical properties of 100% construction- and demolition-waste-based geopolymer composites**
ULUGÖL H., Gunal M. F. , YAMAN İ. Ö. , YILDIRIM G., ŞAHMARAN M.
CEMENT & CONCRETE COMPOSITES, vol.121, 2021 (Journal Indexed in SCI)
- XIX. **Construction and demolition waste-based geopolymers suited for use in 3-dimensional additive manufacturing**
Sahin O., Ilcan H., Atesli A. T. , KUL A., YILDIRIM G., ŞAHMARAN M.
CEMENT & CONCRETE COMPOSITES, vol.121, 2021 (Journal Indexed in SCI)
- XX. **A case study for probabilistic seismic risk assessment of earthquake-prone old urban centers**
Altındal A., Karimzadeh S., ERBERİK M. A. , ASKAN GÜNDOĞAN A., ANIL Ö., KOÇKAR M. K. , ŞAHMARAN M.
INTERNATIONAL JOURNAL OF DISASTER RISK REDUCTION, vol.61, 2021 (Journal Indexed in SCI)
- XXI. **Synthesis and optimization of binary systems of brick and concrete wastes geopolymers at ambient environment**
Mahmoodi O., Siad H., Lachemi M., ŞAHMARAN M.
CONSTRUCTION AND BUILDING MATERIALS, vol.276, 2021 (Journal Indexed in SCI)
- XXII. **Influence of mixing methods on the NO_x reduction capability and electrical properties of photocatalytic cementitious systems**
Sahin O., Bay S., Ilcan H., Yildirim G., ŞAHMARAN M.
CEMENT & CONCRETE COMPOSITES, vol.115, 2021 (Journal Indexed in SCI)
- XXIII. **Evaluation of the tridymite formation as a technique for enhancing geopolymer binders based on glass waste**
Dadsetan S., Siad H., Lachemi M., ŞAHMARAN M.
JOURNAL OF CLEANER PRODUCTION, vol.278, 2021 (Journal Indexed in SCI)
- XXIV. **Development of alkali-activated binders from recycled mixed masonry-originated waste**
Yildirim G., KUL A., Ozcelikci E., ŞAHMARAN M., ALDEMİR A., Figueira D., Ashour A.
JOURNAL OF BUILDING ENGINEERING, vol.33, 2021 (Journal Indexed in SCI)
- XXV. **Mechanical and microstructural characterization of geopolymers from assorted construction and demolition waste-based masonry and glass**
ULUGÖL H., KUL A., Yildirim G., ŞAHMARAN M., ALDEMİR A., Figueira D., Ashour A.
JOURNAL OF CLEANER PRODUCTION, vol.280, 2021 (Journal Indexed in SCI)

- XXVI. **Extensive evaluation on the effect of glass powder on the rheology, strength, and microstructure of metakaolin-based geopolymer binders**
Dadsetan S., Siad H., Lachemi M., ŞAHMARAN M.
CONSTRUCTION AND BUILDING MATERIALS, vol.268, 2021 (Journal Indexed in SCI)
- XXVII. **Effects of Mixture Design Parameters on the Mechanical Behavior of High-Performance Fiber-Reinforced Concretes**
ERDEM T. K. , DEMİRHAN S., Yildirim G., Banyhussan Q. S. , Sahin O., Balav M. H. , ŞAHMARAN M.
JOURNAL OF MATERIALS IN CIVIL ENGINEERING, vol.32, no.12, 2020 (Journal Indexed in SCI)
- XXVIII. **Impact behaviour of nanomodified deflection-hardening fibre-reinforced concretes**
DEMİRHAN S., Yildirim G., Banyhussan Q. S. , Koca K., ANIL Ö., Erdem R. T. , ŞAHMARAN M.
MAGAZINE OF CONCRETE RESEARCH, vol.72, no.17, pp.865-887, 2020 (Journal Indexed in SCI)
- XXIX. **Rapid screening method for the determination of regional risk distribution of masonry structures**
ALDEMİR A., Guvenir E., ŞAHMARAN M.
STRUCTURAL SAFETY, vol.85, 2020 (Journal Indexed in SCI)
- XXX. **Rapid screening method for the determination of seismic vulnerability assessment of RC building stocks**
COŞKUN O., ALDEMİR A., ŞAHMARAN M.
BULLETIN OF EARTHQUAKE ENGINEERING, vol.18, no.4, pp.1401-1416, 2020 (Journal Indexed in SCI)
- XXXI. **Nano-tailored multi-functional cementitious composites**
Ozturk O., Yildirim G., Keskin U. S. , Siad H., ŞAHMARAN M.
COMPOSITES PART B-ENGINEERING, vol.182, 2020 (Journal Indexed in SCI)
- XXXII. **Self-sensing capability of Engineered Cementitious Composites: Effects of aging and loading conditions**
Yildirim G., Ozturk O., Al-Dahawi A., Ulu A. A. , ŞAHMARAN M.
CONSTRUCTION AND BUILDING MATERIALS, vol.231, 2020 (Journal Indexed in SCI)
- XXXIII. **Construction and demolition waste in geopolymer concrete technology: a review**
Dadsetan S., Siad H., Lachemi M., ŞAHMARAN M.
MAGAZINE OF CONCRETE RESEARCH, vol.71, no.23, pp.1232-1252, 2019 (Journal Indexed in SCI)
- XXXIV. **Effect of Rubber Aggregate and Binary Mineral Admixtures on Long-Term Properties of Structural Engineered Cementitious Composites**
Siad H., Lachemi M., Ismail M. K. , Sherir M. A. A. , ŞAHMARAN M., Hassan A. A. A.
JOURNAL OF MATERIALS IN CIVIL ENGINEERING, vol.31, no.11, 2019 (Journal Indexed in SCI)
- XXXV. **Performance of engineered cementitious composites under drop-weight impact: Effect of different mixture parameters**
Yildirim G., Khiavi F. E. , ANIL Ö., Sahin O., ŞAHMARAN M., Tugrul Erdem R.
STRUCTURAL CONCRETE, 2019 (Journal Indexed in SCI)
- XXXVI. **Impact resistance of deflection-hardening fiber reinforced concretes with different mixture parameters**
Banyhussan Q. S. , Yildirim G., ANIL Ö., Erdem R. T. , Ashour A., ŞAHMARAN M.
STRUCTURAL CONCRETE, vol.20, no.3, pp.1036-1050, 2019 (Journal Indexed in SCI)
- XXXVII. **Role of Nanosilica on the Early-Age Performance of Natural Pozzolan-Based Blended Cement**
Yildirim G., Dundar B., ALEESSA ALAM B., YAMAN İ. Ö. , ŞAHMARAN M.
ACI MATERIALS JOURNAL, vol.115, no.6, pp.969-980, 2018 (Journal Indexed in SCI)
- XXXVIII. **Advanced engineered cementitious composites with combined self-sensing and self-healing functionalities**
Siad H., Lachemi M., ŞAHMARAN M., Mesbah H. A. , Hossain K. A.
CONSTRUCTION AND BUILDING MATERIALS, vol.176, pp.313-322, 2018 (Journal Indexed in SCI)
- XXXIX. **Effects of sulphuric acid on mechanical and durability properties of ECC confined by FRP fabrics**
GÜLŞAN M. E. , Mohammedameen A., ŞAHMARAN M., Nis A., Alzebaree R., ÇEVİK A.
ADVANCES IN CONCRETE CONSTRUCTION, vol.6, no.2, pp.199-220, 2018 (Journal Indexed in SCI)
- XL. **Piezoresistive behavior of CF- and CNT-based reinforced concrete beams subjected to static flexural**

loading: Shear failure investigation

Yildirim G., Sarwary M. H. , Al-Dahawi A., ÖZTÜRK O., ANIL Ö., ŞAHMARAN M.

CONSTRUCTION AND BUILDING MATERIALS, vol.168, pp.266-279, 2018 (Journal Indexed in SCI)

XLl. Self-healing performance of aged cementitious composites

Yildirim G., Khiavi A. H. , YEŞİLMEN S., ŞAHMARAN M.

CEMENT & CONCRETE COMPOSITES, vol.87, pp.172-186, 2018 (Journal Indexed in SCI)

XLII. Use of recycled glass powder to improve the performance properties of high volume fly ash-engineered cementitious composites

Siad H., Lachemi M., ŞAHMARAN M., Mesbah H. A. , Hossain K. M. A.

CONSTRUCTION AND BUILDING MATERIALS, vol.163, pp.53-62, 2018 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **FIELD APPLICATIONS FOR RISK ASSESSMENT METHODS OF URBAN TRANSFORMATION LAW NO. 6306: A CASE STUDY OF BEYOĞLU**
ANIL Ö., ŞAHMARAN M., KOÇKAR M. K.
Disaster Science and Engineering, vol.4, no.2, pp.54-64, 2018 (Other Refereed National Journals)

Refereed Congress / Symposium Publications in Proceedings

- I. **Determination of Self-Healing Performance of Cementitious Composites Under Elevated CO2 Concentration by Resonant Frequency and Crack Opening Measurements**
KESKİN S. B. , Ozlem K. K. , Yildirim G., ŞAHMARAN M., ANIL Ö.
3rd International Sustainable Buildings Symposium (ISBS), U ARAB EMIRATES, 15 - 17 March 2017, vol.7, pp.592-602
- II. **Self-Sensing Behavior Under Monotonic and Cyclic Loadings of ECC Containing Electrically Conductive Carbon-Based Materials**
ŞAHMARAN M., Al-Dahawi A., Farzaneh V., Ocal O., Yildirim G.
3rd International Sustainable Buildings Symposium (ISBS), U ARAB EMIRATES, 15 - 17 March 2017, vol.7, pp.566-576
- III. **6306 Sayılı Kentsel Dönüşüm Yasası Risk Değerlendirme Tekniklerinin Saha Uygulaması: Beyoğlu Örneği**
ANIL Ö., ŞAHMARAN M., KOÇKAR M. K.
4.UDMSK, 4. Uluslararası Deprem Mühendisliği ve Sismoloji Konferansı, 11 - 13 October 2017

Supported Projects

ŞAHMARAN M., ALDEMİR A., Project Supported by Higher Education Institutions, Sürdürülebilir Kalkınma için Nano Malzemelerle İyileştirilmiş Ekonomik Şekil Değiştirme Sertleşmesi Davranışı Sergileyen Çimento Esaslı Kompozitler, 2018 - 2020

ŞAHMARAN M., TUBITAK Project, Geçek Zamanlı Yapısal/Malzeme Sağlık İzleme Uygulamaları için Çok Fonksiyonlu Çimento Bağlayıcı Kompozitler, 2014 - 2017

ŞAHMARAN M., TUBITAK Project, Kendiliğinden İyileşme Kabiliyetine Sahip Yeni Nesil Akıllı Çimento Bağlayıcı Kompozitler, 2013 - 2016

ŞAHMARAN M., TUBITAK Project, Beton Yapıların Hızlı Onarımı için Yüksek Performanslı Lif Donatılı Çimento Bağlayıcı Kompozitler, 2012 - 2013

Citations

Total Citations (WOS):219

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