

Mohammad Reza Soudi,

Professor of Microbiology

Affiliation:

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Department of Microbiology,
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Birth Day: 19th July 1965

Born & brought up in Tehran, Iran

Married with two children

Education:

B.Sc., Microbiology, University of Tehran (1987),
M.Sc., Microbiology, University of Tehran (1990),
Ph.D., Microbiology, University of Tehran (2003)

Teaching:

B.Sc. Level: Industrial Microbiology, Bioethics
M.Sc. Level: Water & wastewater Microbiology, Fungal Biotechnology
Ph. D. Level: Evolution of Microorganisms, Advanced Microbial
Biotechnology, Microbiological Aspects of Industrial Fermentation

Supervision of Thesis Program:

Microbiology and Microbial Biotechnology at
MSc. and Ph. D. levels

M. Sc. Supervision: 65 cases completed and 3 cases in hand (2026)

Ph. D. Supervision: 20 Cases (completed) and 3 cases in hand (2026)

Related web-pages:

Microbiology Department (<https://biosciences.alzahra.ac.ir/>)

CiB Biotech Company (<https://cibbiotech.com>)

Environment Protection for Green Fermentation Industries (<https://enviran.ir>)

Iranian Society of Microbial Science and Technology (<https://ismist.ir>)

Collaboration & career:

Member (invited) at Iranian Academy of Science (2025-present)

President of ISMiST: Iranian Society of Microbial Science and Technology (2023-Present)

Scientific Advisor of Gum Tech Company (2001-Present)

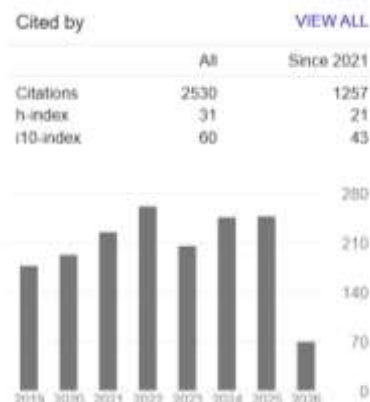
Chief Editor of Journal of Applied Biology (2021-2026)

Dean of Faculty of Biological Sciences (2021-2023)

Head of Industrial Microbiology Laboratory (1990-present)

Member of Research Ethics Committee at Alzahra University (1999-2023)

Board Chairman at CiB Biotech Co. (knowledge-Base Miniature Company) (2012-Present)



Member of Environment Committee at Biotech Development Council-Vice Presidency of Science & Technology (2018-2022)

Fields of research:

Applied & Environmental Microbiology, (removal of toxic organic and inorganic pollutants)
Microbial Biotechnology (bacterial and fungal biopolymers: production and degradation)

Technology Challenges:

Production of xanthan & other microbial polysaccharides, Bioremediation of wastewater, wastewater Valorization in alcoholic fermentation industries and Biodegradation of Plastics

Publications: (Last Ten Years)

Books

1. Malekzadeh, F., **Soudi, M.R.** 2006 “Microbial Biotechnology” Vol. II, Pub. Tehran University.
2. **Soudi, M. R.**, Sadeghizadeh, M., Ahmadian, A, Ebrahimi, M., 2006 Improved Xanthan gum production using genetically mutated and Cloned strains; Pub. East Azarbaijan organization of management and programming
3. Malekzadeh, F., **Soudi, M. R.**, Malekzadeh, S. 2001 “Microbial Biotechnology”, Vol. I, Pub. Tehran University.
4. **Soudi, Mohammad Reza**, 1999, “Fermentation Processes, Theory and Applications”, Pub. Alzahra University.

Articles:

1. Darvishi, F.; B Mirelmi, MR Soudi, M Shiri, GR Mahdavinia, S Shi (2025) Reusable magnetic alginate nanocomposite with immobilized *Pseudozyma antarctica* yeast cells offers the potential for bioremediation and detoxification of reactive black 5 dye, *International Journal of Biological Macromolecules* 306, 141641
2. Gholizadeh-Balderlou, F.; MR Soudi, F Darvishi (2025) Performance of *Pichia kudriavzevii* SDG12 in decolorization and biodegradation of azo dye under optimized conditions, *Journal of Water Process Engineering* 71, 107168
3. Parsania, S.; P Mohammadi, MR Soudi (2024) A metagenomics investigation of bacterial communities in gold mine tailings, *Journal of Microbial Biology* 13 (52), 13-23
4. Hosseini, M.; MR Soudi, P Tajer-Mohammad-Ghazvini, HZ Tavakoli (2024) Uranium biosorption by autolyzed residues of baker yeast: characterization and optimization, *Biomass Conversion and Biorefinery* 14 (18), 22617-22632
5. Niknam, R.; MR Soudi, M Mousavi (2023) Biodegradable composite films based on *Trigonella foenum-graceum* galactomannan—xanthan gum: Effect of grape seed oil on various aspects of emulsified films. *Journal of the American Oil Chemists' Society* 100 (2), 163-174
6. Vosoughian, N.; M Asadbeygi, A Mohammadi, MR Soudi (2023) Green synthesis of zinc oxide nanoparticles using novel bacterium strain (*Bacillus subtilis* NH1-8) and their in vitro antibacterial and antibiofilm activities against ... *Microbial Pathogenesis* 185, 106457
7. Hosseini, M.; MR Soudi, P Tajer-Mohammad-Ghazvini, HZ Tavakoli (2023) Uranium biosorption by autolyzed residues of baker yeast: characterization and optimization *Biomass Conversion and Biorefinery*, 1-16
8. Elikaei, A.; S Poshtiban, MR Soudi (2023) Isolation and identification of bacteriophage effective on *Xanthomonas campestris* strains for their biocontrol. *Biological Journal of Microorganism*

9. Naghdi, Z Moosavi-Nejad, B Gholamhossein Goudarzi, MR Soudi (2023) Phytate-induced dose-response auto-activation of enzyme in commercial recombinant phytase from *Escherichia coli*. *Iranian Journal of Biotechnology* 21 (1), 95-105
10. Babazadeh, F., S Gharavi, MR Soudi, M Zarrabi, Z Talebpour (2023) Potential for Polyethylene Terephthalate (PET) Degradation Revealed by Metabarcoding and Bacterial Isolates from Soil Around a Bitumen Source in Southwestern Iran. *Journal of Polymers and the Environment* 31 (4), 1279-1291
11. Fooladi, T., MR Soudi, SM Hashemi, P Abdeshahian (2022) Production of Childinan SF-2 as Bioactive Compound from *Daldinia childiae*: A Survey on Antioxidant, Antibacterial and Antitumor Properties. *Iranian Journal of Biotechnology* 20 (4), 84-96
12. Niknam, R., MR Soudi, M Mousavi (2022) Rheological and stability evaluation of emulsions containing fenugreek galactomannan—xanthan gum mixtures: effect of microwave and ultrasound treatments. *Macromol* 2 (3), 361-373
13. Parsania, S., P Mohammadi, MR Soudi (2021) Biotransformation and removal of arsenic oxyanions by *Alishewanella agri* PMS5 in biofilm and planktonic states. *Chemosphere* 284, 131-136
14. Modiri, S.; RK Kermanshahi, MR Soudi, N Dad, M Ebadi, HS Zahiri,(2021) Growth Optimization of *Lactobacillus acidophilus* for Production of Antimicrobial Peptide Acidocin 4356: Scale up from Flask to Lab-Scale Fermenter. *Iranian Journal of Biotechnology* 19 (3), e2686
15. Zokaei, FH, S Gharavi, E Asgarani, M Zarrabi, MR Soudi (2021) A Comparative Taxonomic Profile of Microbial Polyethylene and Hydrocarbon-Degrading Communities in Diverse Environments. *Iranian Journal of Biotechnology* 19 (2), e2955
16. Tavassoli Tabatabaei, N., MR Soudi, P Tajer-Mohammad-Ghazvini,(2021) Investigating Mercury Interactions of *Rhodotorula Toruloides* IR-1395 for Mercury Bioremediation Processes in Aquatic Environments. *Biological Journal of Microorganism* 10 (37), 25-36
17. Barati, F.; E Asgarani, S Gharavi, MR Soudi (2021) Considerable increase in Poly (3-hydroxy butyrate) production via *phbC* gene overexpression in *Ralstonia eutropha* PTCC 1615. *BioImpacts: BI* 11 (1), 53
18. Modiri, S.; RK Kermanshahi, MR Soudi, SS Arab, A Khammari, ... (2020) Multifunctional Acidocin 4356 Combats *Pseudomonas aeruginosa* through Membrane Perturbation and Virulence Attenuation: Experimental Results Confirm Molecular Dynamics Simulation. *Applied and Environmental Microbiology* 86 (10).
19. Kahani, M.; F Kalantary, MR Soudi, L Pakdel, S Aghaalizadeh (2020) Optimization of cost effective culture medium for *Sporosarcina pasteurii* as biocementing agent using response surface methodology: Up cycling dairy waste and seawater. *Journal of Cleaner Production*, 120022
20. Bazzazzadeh, R.; Soudi, M. R.; Valinassab, T.; Moradlou, O.; (2020) Kinetics and equilibrium studies on biosorption of hexavalent chromium from leather tanning wastewater by *Sargassum tenerrimum* from Chabahar-Bay Iran. *Journal of Algal Research*; vol. 48. doi.org/10.1016/j.algal.2020.101896
21. Fooladi, T.; MR Soudi, N Alimadadi, P SAVEDORUDI, MM Heravi (2019) Bioactive exopolysaccharide from *Neopestalotiopsis* sp. strain SKE15: Production, characterization and optimization. *International journal of biological macromolecules* 129, 127-139

22. Irankhah, S.; A Abdi Ali, M Mallavarapu, MR Soudi, S Subashchandrabose, ... (2019) Ecological role of *Acinetobacter calcoaceticus* GSN3 in natural biofilm formation and its advantages in bioremediation. *Biofouling* 35 (4), 377-391
23. Irankhah, S.; AA Ali, MR Soudi, S Gharavi, B Ayati (2019) Highly efficient phenol degradation in a batch moving bed biofilm reactor: benefiting from biofilm-enhancing bacteria. *World Journal of Microbiology and Biotechnology* 34 (11), 164
24. Fooladi, T.; P Abdeshahian, N Moazami, MR Soudi, A Kadier, WMW Yusoff, ... (2018) Enhanced Biosurfactant Production by *Bacillus pumilus* 2IR in Fed-Batch Fermentation Using 5-L Bioreactor. *Iranian Journal of Science and Technology, Transactions A: Science* 42 (3) ...
25. Amini, L.; MR Soudi, A Saboora, H Mobasheri (2018) Effect of essential oil from *Zataria multiflora* on local strains of *Xanthomonas campestris*: An efficient antimicrobial agent for decontamination of seeds of *Brassica oleacea*. *Scientia Horticulturae* 236, 256-264
26. Nasr, Sh.; S Bien, MR Soudi, N Alimadadi, SAS Fazeli, U Damm (2018) Novel *Collophorina* and *Coniochaeta* species from *Euphorbia polycaulis*, an endemic plant in Iran. *Mycological Progress* 17 (6), 755-771
27. Ghashghaei, T.; MR Soudi, S Hoseinkhani, M Shiri (2018) Effects of Nonionic Surfactants on Xanthan Gum Production: a Survey on Cellular Interactions. *Iranian Journal of Biotechnology* 16 (1), 59-65
28. Alimadadi, N.; Soudi, M. R. and Talebpour, Z. 2018. Efficient production of tri-acetylated mono-acylated mannosylerythritol lipids by *Sporisorium* sp. aff. sorghi SAM20. *Journal of Applied Microbiology* 124(2): 457- 468.
29. Papizadeh, M.; Soudi, M. R.; Amini, L.; Wijayawardene, N. N. and Hyde, K. D. 2017. *Pyrenochaetopsis tabarestanensis* (Cucurbitariaceae, Pleosporales), a new species isolated from rice farms in north Iran. *Phytotaxa* 297(1): 15- 28.
30. Ashraf, S.; Soudi, M. R. and Ghadam, P. 2017. Production of xanthanases by *Paenibacillus* spp.: complete xanthan degradation and possible applications. *Iranian Journal of Biotechnology* 15(2): 120- 127.
31. Khazeni, S.; Hatamian- Zarmi, A.; Yazdian, F.; Mokhtari- Hosseini, Z. B.; Ebrahimi- Hosseinzadeh, B.; Noorani, B.; Amoabedini, G. and Soudi, M. R. 2017. Production of nanocellulose in miniature-bioreactor: Optimization and characterization. *Preparative Biochemistry and Biotechnology* 47(4): 371- 378.
32. Ashraf, S.; Soudi, M. R.; Amoozegar, M. A.; Moshtaghi- Nikou, M. and Sporer, C. 2017. *Paenibacillus xanthanilyticus* sp. nov., a xanthan-degrading bacterium isolated from soil. *International Journal of Systematic and Evolutionary Microbiology* 68: 76- 80.
33. Sabaeifard, P.; Abdi- Ali, A.; Gamazo, C.; Irache, J. M. and Soudi, M. R. 2017. Improved effect of amikacin-loaded poly (D, L-lactide-co-glycolide) nanoparticles against planktonic and biofilm cells of *Pseudomonas aeruginosa*. *Journal of Medical Microbiology* 66: 137- 148.
34. Jamshidian, H.; Shojaosadati, S. A.; Mousavi, S. M.; Soudi, M. R. and Vilaplana, F. 2017. Implications of recovery procedures on structural and rheological properties of schizophyllan produced from date syrup. *Macromolecules* 105(1): 36- 44.
35. Farkhondeh, S.; Papizadeh, M.; Khansha, J.; Sedghi, M.; Rasooli, M.; Amoozegar, M. A. Soudi, M. R. and Shahzadeh- Fazeli, S. A. 2016. A rapid and reproducible genomic DNA extraction protocol for sequence- based identification of archaea, bacteria, cyanobacteria, diatoms, fungi, and green algae. *Journal of Medical Bacteriology* 5(3-4): 22- 28.

36. Jamshidian, H.; Shojaosadati, S. A.; Vilaplana, F.; Mousavi, S. M. and Soudi M. R. 2016. Characterization and optimization of schizophyllan production from date syrup. *Macromolecules* 92: 484- 493.
37. Sabaeifard, P.; Abdi- Ali, A.; Soudi, M. R.; Gamazo, C. and Irache, J. M. 2016. Amikacin loaded PLGA nanoparticles against *Pseudomonas aeruginosa*. *European Journal of Pharmaceutical Sciences* 93: 392- 398.
38. Alimadadi, N.; Soudi, M. R.; Wang, S. A.; Wang, Q. M.; Talebpour, Z. and Bai, F. Y. 2016. *Starmerella orientalis* f.a., sp. nov., an ascomycetous yeast species isolated from flowers. *International Journal of Systematic and Evolutionary Microbiology* 66: 1476- 1481.
39. Ghashghaei, T.; Soudi, M. R. and Hoseinkhani, S. 2016. Optimization of Xanthan Gum Production from Grape Juice Concentrate Using Plackett-Burman Design and Response Surface Methodology. *Applied Food Biotechnology* 3(1): 15- 23.
40. Nafian, F.; Gharavi, S. and Soudi M. R. 2016. Degenerate primers as biomarker for gene-targeted metagenomics of the catechol 1, 2-dioxygenase-encoding gene in microbial populations of petroleum-contaminated environments. *Annals of Microbiology* 66(3): 1127- 1136.
41. Nasr, S.; Nguyen, H. D. T.; Soudi, M. R.; Shahzadeh- Fazeli, S. A. and Sipiczki, M. 2016. *Wickerhamomyces orientalis* f.a., sp. nov.: an ascomycetous yeast species belonging to the *Wickerhamomyces* clade. *International Journal of Systematic and Evolutionary Microbiology* 66: 2534- 2539.
42. Abdi- Ali, A.; Sabaeifard, P. and Soudi, M. R. 2016. Antibacterial- loaded PLGA nanoparticles against *Pseudomonas aeruginosa*. *Iranian Journal of Infectious Diseases and Tropical Medicine*. 21(74): 1- 6.
43. Irankhah, S.; Soudi, M. R. and Gharavi, S. 2016. Ex situ study of *Enterococcus faecalis* survival in the recreational waters of the southern coast of the Caspian Sea. *Iranian Journal of Microbiology* 8(2): 101- 107.
44. Li, G. J.; KD Hyde, RL Zhao, S Hongsanan, FA Abdel-Aziz, ...M.R. Soudi, ... (2016).... Fungal diversity notes 253–366: taxonomic and phylogenetic contributions to fungal taxa. *Fungal Diversity* 78 (1), 1-237
45. Asgarani, E.; , T Ghashghaei, MR Soudi, N Alimadadi (2015) Enterobacterial repetitive intergenic consensus (ERIC) PCR based genetic diversity of *Xanthomonas* spp. and its relation to xanthan production. *Iranian journal of microbiology* 7 (1), 38
46. Shiri, Z.; RK Kermanshahi, MR Soudi, D Farajzadeh (2015) Isolation and characterization of an *n*-hexadecane degrading *Acinetobacter baumannii* KSS1060 from a petrochemical wastewater treatment plant. *International Journal of Environmental Science and Technology* 12 (2), 455-464
47. Nemati, A.; S Shadpour, H Khalafbeygi, S Ashraf, M Barkhi, MR Soudi (2015) Efficiency of Hydrothermal Synthesis of Nano/ Micro sized Copper and Study on In Vitro Antifungal Activity. *Materials and Manufacturing Processes* 30 (1), 63-69
48. Amini, L.; Soudi, M. R.; Nasr, Sh.; (2015) Isolation of yeasts from rice farms and study of secretory enzyme profile in two species of the genus *Pseudozyma*. *Journal of Molecular and Cellular Research (Iranian Journal of Biology)* 28 ...

49. S Nasr, MR Soudi, SAS Fazeli, HDT Nguyen, M Lutz, M Piątek (2014) Expanding evolutionary diversity in the Ustilaginomycotina: Fereydouniaceae fam. nov. and Fereydounia gen. nov., the first urocystidalean yeast lineage. *Mycological progress* 13 (4), 1012
50. Rahmani-Badi, A.; S Sepehr, P Mohammadi, MR Soudi, H Babaie-Naiej, ... (2014) A combination of cis-2-decenoic acid and antibiotics eradicates pre-established catheter-associated biofilms. *Journal of medical microbiology* 63 (11), 1509-1516
51. Sabaeifard, P.; A Abdi-Ali, MR Soudi, R Dinarvand (2014) Optimization of tetrazolium salt assay for *Pseudomonas aeruginosa* biofilm using microtiter plate method. *Journal of microbiological methods* 105, 134-140
52. S Nasr, MR Soudi, SMZ Nasrabadi, MM Nikou, AH Salmanian, ... (2014) *Basidioascus persicus* sp. nov., a yeast-like species of the order Geminibasidiales isolated from soil. *International journal of systematic and evolutionary microbiology* 64 (9 ...
53. N Jafari, MR Soudi, R Kasra-Kermanshahi (2014) Biodegradation perspectives of azo dyes by yeasts. *Microbiology* 83 (5), 484-497
54. S Sepehr, A Rahmani-Badi, H Babaie-Naiej, MR Soudi (2014) Unsaturated fatty acid, cis-2-decenoic acid, in combination with disinfectants or antibiotics removes pre-established biofilms formed by food-related bacteria. *PloS one* 9 (7), e101677
55. N Jafari, MR Soudi, R Kasra-Kermanshahi (2014) Biodecolorization of textile azo dyes by isolated yeast from activated sludge: *Issatchenkia orientalis* JKS6. *Annals of microbiology* 64 (2), 475-4821
56. Mohammad Reza Soudi, Narjes Kolahchi, 2011 Bioremediation potential of phenol degrading bacterium, *Rhodococcus erythropolis* SKO-1. *Progress in Biological Sciences*; 1: 31-40
57. RoyaTavallaie, Zahra Talebzadeh, Jila Azad, Mohammad Reza Soudi 2011 Simultaneous determination of pyruvate and acetate levels in xanthan biopolymer by infrared spectroscopy: effect of spectral pre-processing for solid-state analysis. *Food Chemistry*; 124: 1124-1130