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🌐 Знание языков

Հայերեն Русский English

🔬 Научные интересы

- Биоэнергетика, Биохимия, Микробиология, Биотехнология

🏆 Государственные награды и почетные звания

2016 Премия Моррисона Рогозы Американского общества микробиологии (ASM)

2019 Серебряная медаль по случаю 100-летия ЕГУ

📖 Публикации

Статья

Gold nanoparticles activate hydrogenase synthesis and improve heterotrophic growth of *Ralstonia eutropha* H16

Tatevik Manutsyan, Syuzanna Blbulyan, Anait Vassilian, Tatiana Semashko, Gayane Kirakosyan, Lilit Gabrielyan, Karen Trchounian, Anna Poladyan

FEMS Microbiology Letters 2024 1-8

Статья

Growth and hydrogen production by *Escherichia coli* during utilization of sole and mixture of sugar beet, alcohol, and beer production waste

Kairat Bekbayev, Satenik Mirzoyan, Akerke Toleugazykyzy, Dinara Tlevlessova, Anait Vassilian, Anna Poladyan, Karen Trchounian

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Role of the *Escherichia coli* FocA and FocB formate channels in controlling proton/potassium fluxes and hydrogen production during osmotic stress in energy-limited, stationary phase fermenting cells

Anush Babayan, Anait Vassilian, Anna Poladyan, Karen Trchounian

Biochimie 2024 91-98

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Proton conductance and regulation of proton/potassium fluxes in *Escherichia coli* FhIA-lacking cells during fermentation of mixed carbon sources

Heghine Gevorgyan, Anna Poladyan, Karen Trchounian, Anait Vassilian
Archives of Biochemistry and Biophysics 2024 109999

Статья

Development of an H₂ fuel cell electrochemical system powered by Escherichia coli cells

Torgom Seferyan, Lusine Baghdasaryan, Meri Iskandaryan, Karen Trchounian, Anna Poladyan

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Seda Marutyan, Hasmik Karapetyan, Lusine Khachatryan, Anna Muradyan, Syuzan Marutyan,

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L-amino acids affect the hydrogenase activity and growth of Ralstonia eutropha H16

Meri Iskandaryan, Syuzanna Blbulyan, Mayramik Sahakyan, Anait Vassilian, Karen Trchounian,

Anna Poladyan

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Valorization of whey-based side streams for microbial biomass, molecular hydrogen, and hydrogenase production

Anna Poladyan, Karen Trchounian, Ela Minasyan, Meri Iskandaryan, Hayarpi Aghekyan, Sargis Aghayan,

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The influence of hydrogen production on the formation of metabolic pathways and regulation of ΔpH in Escherichia coli

Heghine Gevorgyan, Anait Vassilian, Anna Poladyan, Karen Trchounian

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THE EFFECT OF ANTIOXIDANT ACTIVITY OF PLANTS TRIFOLIUM PRATENSE L. AND CRATAEGUS LAEVIGATA ON LIPID PEROXIDATION IN RAT'S TISSUES EXPOSED TO HYPOBARIC HYPOXIA

I. A. BADALYAN, A. A. POLADYAN

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BIOMASS AND BIOHYDROGEN PRODUCTION BY ESCHERICHIA COLI UPON CONSUMPTION OF MEAT INDUSTRY AND LIGNOCELLULOSIC CORN WASTES MIXTURE

Syuzanna Blbulyan, Satenik Mirzoyan, Karen Trchounian, Anna Poladyan

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Biomass and biohydrogen production during dark fermentation of Escherichia coli using office paper waste and cardboard

Anna Poladyan, Lena Margaryan, Karen Trchounian, Armen Trchounian
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Application of organic waste glycerol to produce crude extracts of bacterial cells and microbial hydrogenase—the anode enzymes of bio-electrochemical systems

Anna Poladyan, Syuzanna Blbulyan, Tatiana Semashko, Volha Dziameshka, Liudmila Zhukouskaya,

Armen Trchounian

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ETHANOL SUPPLEMENTATION AS A NEW APPROACH TO REGULATE GROWTH AND HYDROGEN PRODUCTION OF ESCHERICHIA COLI UPON GLYCEROL FERMENTATION

A. A. Poladyan

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Anna Poladyan, Syuzanna Blbulyan, Mayramik Sahakyan, Oliver Lenz, Armen Trchounian

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Characterization of hydrogen production by *Escherichia coli* wild-type and mutants of hydrogenases utilizing xylose as fermentation substrate

Anna Poladyan, Armen Trchounian

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Hydrogen production by *Escherichia coli* using brewery waste: optimal pretreatment of waste and role of different hydrogenases

Anna Poladyan, Karen Trchounian, Anait Vassilian, Armen Trchounian

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Anna Poladyan, Lusine Baghdasaryan, Armen Trchounian

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Enhancement of *Escherichia coli* bacterial biomass and hydrogen production by some heavy metal ions and their mixtures during glycerol vs glucose fermentation at a relatively wide range of pH

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A. Poladyan

Հայաստանի Կենսաբանական հանդես 2017 153-159

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Համակարգչային տեխնոլոգիաների կիրառման առավելությունները և փորձը բուհական

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Hydrogen-oxidizing hydrogenases 1 and 2 of Escherichia coli regulate the onset of hydrogen evolution and ATPase activity, respectively, during glucose fermentation at alkaline

evolution and ATPase activity, respectively, during glucose fermentation at alkaline

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Anna Poladyan, Anait Vassilian, Armen Trchounian, Arev Avagyan

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Glycerol fermentation and molecular hydrogen production by Escherichia coli batch cultures affected by some reducing reagents and heavy metal ions

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Конференция

Effect of Different Substrates on Growth and Redox Potential Kinetics of Escherichia coli Wild Type and Hydrogenases Lacking Mutant

Anna Poladyan, Satenik Mirzoyan, Armen Trchounian

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Glycerol Fermentation and Hydrogen Metabolism by Escherichia coli: New Approaches to Enhance Hydrogen Production

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Hydrogen production by Escherichia coli wild type and hydrogenase mutants upon formate and glycerol fermentation under different growth conditions

A. Poladyan, S. Mirzoyan, K. Trchounian, A. Trchounian

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Developing hydrogen production biotechnology: cheap substrates, effective strains and optimized fermentative conditions

K.Trchounian, A. Poladyan, L. Gabrielyan, A. Trchounian

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Escherichia coli growth and hydrogen production upon glycerol fermentation at slightly acidic pH: effects of formate and some heavy metal ions

Karen Trchounian, Astghik Vardanyan, Anna Poladyan, Armen Trchounian

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Optimization Strategy for Hydrogen Production by Escherichia coli Using Brewery Waste

A. Poladyan, K. Trchounian, A. Trchounian

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H₂ PRODUCTION BY ESCHERICHIA COLI BATCH CULTURES DURING FERMENTATION OF GLYCEROL, LACTOSE AT DIFFERENT pHs

S. Mirzoyan, A. Poladyan, K. Trchounian, A. Trchounian

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ESCHERICHIA COLI GROWTH AND HYDROGEN PRODUCTION USING BREWERY WASTE: OPTIMAL PRETREATMENT AND ROLE OF HYDROGENASES

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Glucose concentrations influence on activities of FoF₁ ATPase and hydrogenase 4 in Escherichia coli

A. Poladyan, M. Sahakyan, S. Blbulyan, K. Trchounian, A. Trchounian

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ՄԱՆՐԵՆԵՐԻ ԿԵՆՍԱՏԵԽՆՈԼՈԳԻԱՆԵՐԻ ՄԱԳԻՍՏՐՈՍԱԿԱՆ ՆՈՐ ԾՐԱԳՐԵՐԻ ԴԱՍԱԿԱՆԴՄԱՆ ՄԵԹՈԴԱԲԱՆԱԿԱՆ ՍՈՏԵՑՈՒՄՆԵՐԸ ԵՐԵՎԱՆԻ ՊԵՏԱԿԱՆ ՀԱՄԱԼՍԱՐԱՆՈՒՄ
Թռչունյան Կ.Ա., Գաբրիելյան Լ.Ս., Փոլադյան Ա.Ա., Թռչունյան Ա.Հ.

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Growth and Bioenergetics Properties of Facultative Chemolithoautotrophic Bacterium Ralstonia Eutropha Upon Organic Waste Materials Utilization

S. Blbulyan, M. Sahakyan, A. Poladyan, A. Trchounian

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A. Poladyan, R. Hayrapetyan, A. Trchounian

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Anna Poladyan, Lusine Baghdasaryan, Karen Trchounian, Armen Trchounian

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The relationship of Escherichia coli Hyd enzymes with the F0F1-ATPase during fermentation of mixture of carbon sources

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From organic waste to biohydrogen: Approaches to enhance H₂ production by Escherichia coli

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From organic wastes to biohydrogen: responsible hydrogenases upon different carbon mixtures utilization by Escherichia coli.

Anna Poladyan, Karen Trchounina, Armen Trchounian

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Hydrogenase Activity of the Facultative Chemolithoautotroph Ralstonia eutropha Consuming Brewery Waste

A. Poladyan, O. Lenz, A. Trchounian

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Ralstonia eutropha Hydrogenase Application in Bioelectrocatalysis as Anode Enzyme

A. Poladyan, T. Semashko, L. Zhukouskaya, V. Dziameshka, A. Trchounian

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Analysis of the Escherichia coli hydrogenases as anodic enzymes in bioelectrochemical system

Anna Poladyan, Tatyana Semashko, Lyudmila Zhukouskaya, Volha Diameshka, Armen Trchounian

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Upcycling of office waste paper and cardboard to biohydrogen

Anna Poladyan, Lena Margaryan, Karen Trchounian, Tatyana Semashko, Armen Trchounian

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Redox regulation of the growth, hydrogenase activity and bioenergetic properties of Ralstonia eutropha upon different carbon source utilization

S. Blbulyan, M. Sahakyan, A. Poladyan, A. Trchounian

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Lignocellulosic waste as feedstock for bacterial biomass production: enhanced hydrogen evolution and hydrogenase activity

Anna Poladyan, Syuzanna Blbulyan, Mayramik Sahakyan, Armen Trchounian

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H₂ - Oxidizing Activity of Escherichia coli Upon Utilization of Different Waste Components

A. Poladyan, L. Baghdasaryan, S. Blbulyan, A. Trchounian

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Ethanol Affected Bacterial Growth and molecular Hydrogen Production by Escherichia coli Upon Fermentation of Glycerol

S.Blbulyan, A. Poladyan, A. Trchounian

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Prospective Trends in Biotechnology for Biohydrogen

Karen Trchounian, Anna Poladyan, Lilit Gabrielyan, Armen Trchounian

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The role of formate neutralization and molecular hydrogen generation in the metabolic flux in Escherichia coli during fermentation of mixed carbon sources

Gevorgyan H., Poladyan A., Trchounian K.

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Biohydrogen Production from Roasted Coffee Waste: Understanding the Role of E. coli Hydrogenases During Fermentation

S. Mirzoyan, L. Vanyan, H. Aghekyan, A. Poladyan, K. Trchounian

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Optimization of Fruits Waste Pretreatment for E. coli Growth and H₂ Production

S. Mirzoyan, A. Vassilian, A. Poladyan, K. Trchounian

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Biomass and biohydrogen production by Escherichia coli upon consumption of meat and lignocellulosic waste mixture

Syuzanna Blbulyan, Anna Poladyan, Satenik Mirzoyan, Liana Mnatsakanyan, Karen Trchounian

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WINE GRAPE WASTE APPLICATION FOR ESCHERICHIA COLI BIOMASS AND H₂ PRODUCTION

Syuzanna Blbulyan, Lusine Baghdasaryan, Satenik Mirzoyan, Anahit Vassilian, Tatiana Semashko,

Anna Poladyan

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The valorization of whey-based side-streams for microbial biomass, hydrogen and hydrogenase enzyme production

Anna Poladyan, Hayarpi Aghekyan, Ella Minasyan, Karen Trchounian, Ani Paloyan, Sargis Aghayan,

Garabed Antranikian, Meri Iskandaryan, Diana Ghevondyan

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ՕՐԳԱՆԱԿԱՆ ԹԱՓՈՆՆԵՐԻՑ ԿԵՆՍԱԶԱՆԳՎԱԾԻ ԵՎ ԿԵՆՍԱԵՆԵՐԳԻԱՅԻ ՓՈԽԱԿԵՐՊՄԱՆ ԿԵՆՍԱԹԻՄԻԱԿԱՆ ՈՐԴԻՆԵՐԻ ԲՆՈՒԹԱԳՐՈՒՄԸ ԵՎ ՕՔՍԻԴԱԿԵՐԱԿԱՆԳՈՂԱԿԱՆ ԿԱՐԳԱՎՈՐՈՒՄԸ

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THE OXIDATIVE STRESS AND POSSIBLE PREVENTIVE ACTION OF PLANT BORN POLYPHENOLS

Anahit Shirvanyan, Anush Babayan, Alvard Minasyan, Margarit Petrosyan, Anna Poladyan,

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THE OXIDATIVE STRESS AND T2DM-INDUCED DIABETIC NEPHROPATHY: POSSIBLE PREVENTIVE ACTION OF PANT-BORN OLIGOMERIC POLYPHENOLS

Gohar Sahakyan, Anne Vejux, Margarit Petrosyan, Anna Poladyan, Naira Sahakyan

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Characteristic effects of gold nanoparticles on growth and H₂ metabolism of *Ralstonia eutropha* H16 and *Escherichia coli*

Anna Poladyan, Tatev Manutsyan, Meri Iskandaryan, Syuzanna Blbulyan, Anait Vassilian,

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The role of glycine-betaine in the hydrogen metabolism of *Ralstonia eutropha* H16

Meri Iskandaryan, Liana Mnatsakanyan, Anna Poladyan

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A NOVEL COST-EFFECTIVE APPROACH FOR PRODUCTION OF HYDROGENASE ENZYMES AND MOLECULAR HYDROGEN FROM WHEY-BASED BY-PRODUCTS

Anna Poladyan, Meri Iskandaryan, Ofelya Karapetyan, Ela Minasyan, Anait Vassilian, Karen Trchounian,

Garabed Antranikian

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REDOX REGULATION OF HYDROGEN PRODUCTION IN *ESCHERICHIA COLI* DURING GROWTH ON BYPRODUCTS OF THE WINE INDUSTRY

Lusine Baghdasaryan, Karen Trchounian, Garabed Antranikian, Anna Poladyan, Ofelya Karapetyan

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BIOTECHNOLOGICAL POTENTIAL OF SPENT COFFEE GROUNDS FOR LARGE-SCALE HYDROGEN PRODUCTION

Liana Vanyan, Anait Vassilian, Anna Poladyan, Karen Trchounian

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Influence of acidic pH on the interaction between proton ATPase and enzymes responsible for molecular hydrogen generation

Karen Trchounian, Heghine Gevorgyan, Lilit Baghdasaryan, Anait Vassilian, Anna Poladyan

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Formate-hydrogen lyase has a significant role in proton motive force generation in *Escherichia coli* at acidic pH during mixed carbon fermentation

Heghine Gevorgyan, Anait Vassilian, Anna Poladyan, Karen Trchounian

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The impact of oxygen-tolerant hydrogenases on cell energetics of *Cupriavidus necator* H16

Meri Iskandaryan, Anna Poladyan

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Understanding the Role of Escherichia coli Hydrogenase-2 subunits in proton flux under different glucose concentrations

Liana Vanyan, Anait Vassilian, Anna Poladyan, Karen Trchounian

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Anna Poladyan, Karen Trchounian, Naira Sahakyan

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Cupriavidus necator H16 growth and H₂-oxidizing Activity Using Mixture of Glycerol and Roasted Coffee Waste

R. Avetisyan, L. Mnatsakanyan, K. Trchounian, A. Poladyan

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Evaluation of an H₂ fuel cell electrochemical system powered by microbial cells

M. Iskandaryan, A. Poladyan, L. Baghdasaryan, T. Seferyan

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Effect of glycine on the heterotrophic growth and [NiFe]-hydrogenase activity of Cupriavidus necator H16

M. Iskandaryan, J. Schoknecht, O. Lenz, A. Poladyan
