

# Liana Manvel Vanyan

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## Language skills

Հայերեն Русский English

## Publications

### Article

#### **Biotechnological potential of spent coffee grounds for biohydrogen production by Escherichia coli**

Liana Vanyan, Hayarpi Aghekyan, Anait Vassilian, Anna Poladyan, Karen Trchounian

International Journal of Hydrogen Energy 2025 1121-1131

### Article

#### **Fermentation of Sugar Beet Pulp by E. coli for Enhanced Biohydrogen and Biomass Production**

Gayane Mikoyan, Liana Vanyan, Akerke Toleugazykyzy, Roza Bekbayeva, Kamila Baichiyeva, Kairat Bekbayev, Karen Trchounian

Energies 2025 2648

### Article

#### **Microbial Valorization of Sunflower Husk for Sustainable Biohydrogen and Biomass Production**

Liana Vanyan, Akerke Toleugazykyzy, Kaisar Yegizbay, Ayaulym Daniyarova, Lyudmila Zuloyan, Gayane Mikoyan, Anait Vassilian, Anna Poladyan, Kairat Bekbayev, Karen Trchounian

Energies 2025 3885

### Article

#### **Evidence for bidirectional formic acid translocation in vivo via the Escherichia coli formate channel FocA**

Liana Vanyan, Michelle Kammel, R Gary Sawers, Karen Trchounian

Archives of Biochemistry and Biophysics 2024 109877

### Article

#### **PROTON AND POTASSIUM FLUXES IN ESCHERICHIA COLI MUTANTS WITH DEFECTS IN SUBUNITS RESPONSIBLE FOR MATURATION OF HYD-1 AND HYD-2 DURING GLUCOSE FERMENTATION**

L.M. Vanyan

Proceedings of the YSU B: Chemical and Biological Sciences 2024 54-67

### Article

#### **Glucose concentration is determinant for the functioning of hydrogenase 1 and hydrogenase**

## **2 in regulating the proton and potassium fluxes in Escherichia coli at pH 7.5**

Liana Vanyan, Karen Trchounian

Biochimie 2024 205-216

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*Article*

## **HyfF subunit of hydrogenase 4 is crucial for regulating FOF1 dependent proton/potassium fluxes during fermentation of various concentrations of glucose**

Liana Vanyan, Karen Trchounian

Journal of Bioenergetics and Biomembranes 2022 69-79

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*Article*

## **Biogas and Biohydrogen Production Using Spent Coffee Grounds and Alcohol Production Waste**

Liana Vanyan, Adam Cenian, Karen Trchounian

Energies 2022 5935

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*Article*

## **Coffee silverskin as a substrate for biobased production of biomass and hydrogen by Escherichia coli**

Satenik Mirzoyan, Hayarpi Aghekyan, Liana Vanyan, Anait Vassilian, Karen Trchounian

International Journal of Energy Research 2022 23110-23121

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*Article*

## **INDUSTRIAL WASTE-BASED HYDROGEN PRODUCTION TECHNOLOGY: THE PROFITABILITY FOR INDUSTRIAL WASTE GENERATORS**

Liana Vanyan, Heghine Gevorgyan, Hripsime Petrosyan, Armen Trchounian, Karen Trchounian

ԿԵՐԱԿԱԼԳԼՎՈՂ ԵՎ ՄԱՔՈՒՐ ԷԼԵՐԳԻԱՅԻ 7-ՐԴ ՄԻՋԱԶԳԱՅԻՆ ՀԱՄԱԺՈՂՈՎԻ ՆՅՈՒԹԵՐ 2021 56-59

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*Article*

## **Defining the roles of the hydrogenase 3 and 4 subunits in hydrogen production during glucose fermentation: A new model of a H<sub>2</sub>-producing hydrogenase complex**

Hripsime Petrosyan, Liana Vanyan, Armen Trchounian, Karen Trchounian

International Journal of Hydrogen Energy 2020 5192-5201

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*Article*

## **Roasted coffee wastes as a substrate for Escherichia coli to grow and produce hydrogen**

Hripsime Petrosyan, Liana Vanyan, Satenik Mirzoyan, Armen Trchounian, Karen Trchounian

FEMS Microbiology Letters 2020 fnaa088 ,7ԷԶ

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*Conference*

## **The Role of Escherichia coli FOF1 -ATPase and Hydrogenases on Specific Growth Rate During Glucose Fermentation**

Karen Trchounian, Hripsime Petrosyan, Liana Vanyan, Armen Trchounian, Anait Vassilian

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*Conference*

## **Interaction between Escherichia coli Hydrogenase-4 and FOF1- ATPase for proton translocation during fermentation of various glucose concentrations at slightly alkaline pH.**

LIANA VANYAN, ARMEN TRCHOUNIAN, KAREN TRCHOUNIAN

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*Conference*

**Anaerobic Utilization of Spent Coffee Grounds (SCG) by E. Coli: the Importance of Pretreatment to Optimize Hydrogen and Biomass Generation**

L. Vanyan, H. Aghekyan, K. Trchounian

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*Conference*

**NOVEL APPLICATION FOR ROASTED COFFEE WASTES AS A SUBSTRATE FOR DEVELOPMENT OF BIOFERTILIZERS**

Liana Vanyan Manvel

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*Conference*

**Proton/potassium Fluxes Depend on Glucose Concentration in E. coli at pH 7.5**

Liana Vanyan, Anait Vassilian, Karen Trchounian

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*Conference*

**Is FHL Complex Responsible for Sensing Glucose Concentration?**

Liana Vanyan, Anait Vassilian, Karen Trchounian

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*Conference*

**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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*Conference*

**ՕՐԳԱՆԱԿԱՆ ԹԱՓՈՆՆԵՐԻՑ ԿԵՆՍԱԶԱՆԳՎԱԾԻ ԵՎ ԿԵՆՍԱԷՆԵՐԳԻԱՅԻ ՓՈԽԱԿԵՐՊՄԱՆ ԿԵՆՍԱՔԻՄԻԱԿԱՆ ՈՒՂԻՆԵՐԻ ԲՆՈՒԹԱԳՐՈՒՄԸ ԵՎ ՕՔՍԻԴԱԿԵՐԱԿԱՆԳՈՂԱԿԱՆ ԿԱՐԳԱՎՈՐՈՒՄԸ**  
Փոլադյան Ա.Ա., Գևորգյան Հ.Խ., Վանյան Լ.Մ., Բաբայան Ա.Ռ., Բաղդասարյան Լ.Հ., Վասիլյան Ա.Վ.,  
Պետրոսյան Հ.Հ.

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*Conference*

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

Liana Vanyan, Anait Vassilian, Anna Poladyan, Karen Trchounian

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*Conference*

**THE ROLE OF E. COLI HYDROGENASE-1 IN PROTON FLUX DURING GLUCOSE UTILIZATION AT PH 7.5**

Liana Vanyan, Karen Trchounian

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*Conference*

**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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*Conference*

**The effect of entire deletion of Hydrogenase-1 and 2 on proton flux during utilization of varied glucose concentration at pH 7.5**

L. Vanyan, K. Trchounian

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*Conference*

**The role of the CRP global regulator in proton flux of Escherichia coli under different glucose concentrations**

Liana Vanyan, Lilit Grigoryan, Karen Trchounian

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*Conference*

**Growth and Hydrogen Production of Escherichia Coli BW25113 in Mixtures of Sugar Beet Pulp and Sugar Beet Molasses**

Gayane Mikoyan, Liana Vanyan, Karen Trchounian, Kamila Baichiyeva, Kaiser Yegizbay, Kairat Bekbayev

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