## Реферат за избор проф. др Георгиоса Н. Анастассакиас, дипл.инж .рударства у ИНОСТРАНОГ члана АИНС

### 1. Биографски подаци

Проф. др Георгиос Н. Анастассакис (27.04.1958. Атина, Грчка). Дипломирао је на Националном техничком универзитету у Атини (НТУА) 1983. год. у области припреме минералних сировина. Тема рада је била: "Пројектовање постројења за прераду минерала руде гвожђа са острва Серифос, Киклади" (Mineral Processing Plant Design of Iron Ore from Serifos Island, Cyclades). Докторску дисертацију са темом: "Допринос оплемењивању непромењене фосфатне стене Епирске области (Грчка)", (Contribution to the beneficiation of the unaltered phosphate rock of Epirous area (Greece), одбранио је 13.07.1989.год., на истом факултету, под менторствм Проф. др Antonios Z. Frangiskos. Каријеру је започео 1989. године као наставни кадар по уговору (1989-92); затим, у LARCO GMMSA Ferronickel Co. (1992-94). На Одсеку за истраживање и развој, изабран за предавача на Националном техничком универзитету у Атини НТУА 1994. Од тада је сукцесивно унапређиван у асистента, ванредног и редовног професора 2009. године. Проф. др Георгиос Н. Анастассакис на Националном техничком универзитету у Атини (НТУА) држи наставу на основним академским студијама, на мастер и на докторским студијама већег броја предмета. Углавном су то предмети који се односе на питања припреме минералних сировина, физичку хемију на површини минерала, што је од виталног значаја за спровођење савремених истраживања (сулфида и индустријских минерала), поступком флотацијске концентрације, која је најважнија операција у припреми минералних сировина, прераде финих и ултра финих честица, прераде јаловине, пречишћавање отпадних вода поменутим поступком. Члан је многих међународних научних друштава, као што су: Међународни Конгрес о Припреми Минералних Сировина (International Mineral Processing Congress-IMPC), Балкански Конгрес о Припреми Минералних Сировина (Balkan Mineral Processing Congress-BMPC), Балканска Академија Наука о Технологији Минерала (Balkan Academy of Science on Mineral Technology-BASMT, члан Научног саветодавног одбора MiMeR (Рециклажа минерала и метала) истраживачког центра на Технолошком универзитету Lulea, Шведска (2002-4).

### 2. Научни резултати

Кандидат је остварио запажене научне резултате и показао изврсност у свим аспектима своје професије које обухватају наставу, опсежна истраживања како фундаменталних тако и примењених проблема, објављивање резултата истраживања, учешће на конгресима и симпозијумима, организационим и научним комитетима за симпозијуме, саветодавних одбора, уређивачких одбора и др. Поред тога његова посебна научна актвност се огледа и у рецензирању радова бројних међународних часописа широм света, о припреми минералних сировина, хемији на површини минерала и колоидима, питањима животне средине и одрживости, материјалима, хемијском инжењерству (преко 40 међународних часописа са високим IF). Поред бројних активности, професор Анастассакис ужива одличну међународну репутацију као академски наставник и научник. Његова листа публикација у часописима и конференцијама је импресивна и веома је цењен у међународним круговима због свог истраживачког доприноса. Као аутор или коаутор објавио је 130 научних и стручних радова, од којих је 12 радова са ISI-JCR-SCI листе (М20) и то: 2 рада М21а, 4 рада М21, 3 рада М22, 3 рада М23 и 30 радова у међународним часописима који нису код нас категорисани. Од осталих радова објавио је 34 рада М31, 47 радова М33, 3 рада М34 и 4 рада М63 и девет књига од којих је 5 међународних. Научна успешност кандидата према Scopus сервису Хиршовом индексу је: h-index = 8, Број публикација: 21, Цитираност:556, https://www.scopus.com/authid/detail.uri?authorId=6507703993, односно ResearchGate: https://www.researchgate.net/profile/Georgios-Anastassakis Хиршов индекс h-index=8, Број публикација: 39, Цитираност: 686,

### 3. Инжењерске реализације

Проф. др Георгиос Н. Анастассакие изузетно је активан на стручно-професноналном плану. Учествовао је у реализацији истраживања 10 развојних и научних пројеката, изради 11 привредних пројекта и преко 40 експертских оцена као што су: издвајање уранијума из лигнита, издвајање злата, прерада многих минералних сировина (сулфида, фосфата, фелдспата, кијанита, антимонита, барита, магнезита, воластонита, угља, хромита, кварца итд.) коришћењем физичких и физичко-хемијских метода (методе гравитацијске концентрације, магнетске и електростатичке сепарације, флотацијске концентрације, селективне агломерације), издвајање нуспроизвода из јаловине, уклањање гвожђа из индустријских минерала, прерада финих и ултра-финих честица применом магнетног премаза или методама селективне агломерације, флокулације и рада згушњивача у индустрији, електросмотско одводњавање муљног муља, уклањање јона тешких метала и фосфата из отпадне воде флотацијом и коришћењем природних сорбената (минерали, хитозан), фактори који утичу на стварање финих честица у ротационим пећима, издвајање иуспроизвода из индустријских отпада, издвајање метала из отпадних вода, сепарације финих дисперзних материјала из електричног отпада, издвајање бакра из отпадних електричних каблова, одвајање метала од електричног и електронског отпада, пречишћавање воде од нафте и др. Посебно треба поменути употребу калцита као природног адсорбента за уклањање фосфата из отпадних вода.

На националном нивоу, радио је на пројектима као: представник за земљу у Саветодавној групи ЕУ за угаљ и челик (подгрупа за челик), 2008-2010, представник земље у Експертској групи за управљање ризиком у сектору екстракције (Генерални директорат Европске комисије за управљање отпадом из животне средине и секундарни материјали) (2020-данас), представник земље у Техничкој саветодавној групи ЕУ за управљање ризиком у сектору екстракције (2020-данас) и члан стручног научног комитета, на позив грчког Министарства енергетике и животне средине да процени достављени инвестициони пројекат и пословни план Hellas Gold CA, 2020.

### 4. Остали показатељи успеха

Проф. др Георгиос Н. Анастассакис руководио је више од 35 магистарских теза. Био је члан комисије у више од 70 завршних радова и мастер студија. Руководио је са 3 докторске дисертације и био је члан комисије више од 20 пута за одбрану докторских дисертација. До сада је, самостално и у сарадњи са другим ауторима, објавио преко 130 научних радова у међународним часописима, девет књига од којих је 5 међународних. Кандидат је учествовао и излагао радове на бројним мећународним научним скуповима, организовањем посета, предавања и успостављања сарадње са бројним страним стручњацима, краћим студијским боравцима у иностранству (Русија, Турска, Бугарска, Македонија, Србија, Босна и Херцеговина, Мађарска, Италија, итд.). Проф. др Георгиос Н. Анастассакис, ангажован је на многим административним функцијама факултета (продекана, директора лабораторије за припрему минералних сировина и др.), наставном делатношћу, и посебно на научноистраживачком пољу. Научна и стручна проблематика којом се бави припада области рударства, и то припреми минералних сировина. Његов укупан рад и репутација као академског наставника су веома добро препознати о чему сведоче позиви да држи предавања по позиву о одрживости и другим темама. Међу њима, као говорник на семинарима које организује "FORGEA International (ИТАЛИЈА), Eski-Sehir (Турска), Marakeš (Мароко), Нататеt (Тунис). Такође, боравио је на студијском боравку (САД) у иностранству дуже од 2 месеца код професора Р. Somasundaran: Invited Researcher in Columbia University (New York) - Dept. Earth and Environmental Engineering (working with Prof. P. Somasundaran).

### 5. Награде и признања

Професор Анастассакис као круну каријере, предложен је за награду СИПС-а као признање за његове бројне глобално признате доприносе. У октобру 2024. године (20.10. до 24.10. 2024.), на Криту одржаће се међународни симпозијум у част истакнутог рада и животних достигнућа проф. Георгиоса Н. Анастассакиса, познатог професионалца у области припреме минералних сировина.

На сајту овог симпозијума: <a href="https://www.flogen.org/sips2024/Georgios\_Anastassakis.php">https://www.flogen.org/sips2024/Georgios\_Anastassakis.php</a> налази се лого: Академије инжењерских наука Србије (АИНС), (ИТНМС) Београд, (РИ), Београд, и часописа ТФ у Бору, што најбоље осликава његову сарадњу са српским институцијама и појединцима.

### мишљење и предлог комисије

На основу изложеног и познавања инжењерских, научних и образовних доприноса Проф. др Георгиос Н. Анастассакиса, посебно његовог односа према српском народу и градњи научне сарадње, част нам је да предложимо Скупштини АИНС, да се Проф. др Георгиос Н. Анастассакис изабере за иностраног члана АИНС.

Београд, 20.08.2024.године

Комисија за писање реферата

одређена одлуком Председништва АИНС на седници 2.7.2024.године

Проф. др Љубиша Андрић, редовни улан АИНС-а Научни саветник

Академик проф. др Слободан Вујић, редовни члан АИНС-а

Емеритус проф. др Надежда Ћапић, редовни члан АИНС-а

### 1. ПРЕДЛОГ кандидата за члана

Академија инжењерских наука Србије Одељење рударских, геолошких и системских наука

Председништву АИНС

Београд, 14. јун 2024.

Предмет: Георгиос Анастасакис, кандидат Одељења

На седници Одељења рударских, геолошких и системских наука одржаној 13. јуна 2024.г. на Рударском институту Београд, на основу спроведеног гласања закључено је да је проф. др <u>:</u> Георгиос Анастасакис, Национални технички универзитет, Атина, Грчка, добио потребан број гласова да буде предложен за учествовање на конкурсу за избор нових чланова АИНС 2024 за иностраног члана.

Иницијални предлог да проф. Георгиос Анастасакис буде предложен за учествовање на конкурсу за избор нових чланова АИНС 2024. поднели су проф. др Љубиша Андрић, редовни члан АИНС, и проф. др Нада Ћалић, редовни члан АИНС.

На седници је од укупно 13 чланова са списка прелиминарног радног састава Одељења евидентирано присуство 12 чланова, (8 редовних и 4 дописна),

Предлог да проф. Георгиос Анастасакис буде кандидат Одељења за избор у звање инострани члан АИНС тајним гласањем је добио подршку од 11 гласова, а један листић је био неважећи.

Предлажемо да комисија за писање реферата буде у саставу: проф. др Љубиша Андрић, редовни члан АИНС, академик проф. др Слободан Вујић, редовни члан АИНС, и проф. др Нада Ћалић, редовни члан АИНС.

Секретар ОРГСН

Ше Уур шевше Проф. др Мирко Вујошевић

## 2. САГЛАСНОСТ кандидата



## NATIONAL TECHNICAL UNIVERSITY OF ATHENS

SCHOOL OF MINING AND METALLURGICAL ENGINEERING
DIRECTOR OF MINERAL PROCESSING LABORATORY
9 HEROON POLYTECHNIOU STR., TECHNICAL UNIVERSITY CAMPUS
GR-157 80 ZOGRAPHOU, ATHENS, GREECE

Dr. Georgios Anastassakis, Professor Director of Mineral Processing Laboratory Tel.: +30 210 7722162 - Fax: +30 210 7722119

E-mail: ganastas@metal.ntua.gr, mmmsga@central.ntua.gr

Athens, 10-06-2024

Academy of Engineering Sciences of Serbia (AESS) 16 Kraljice Marije Street, 11000 Belgrade, Serbia Department of Mining, Geological and Systems Sciences

CONSENT

Respected,

I am happy to accept the proposal of Prof. Dr. Ljubiša Andrić, scientific advisor and Emeritus Prof. Dr. Nadežda Ćalić, Academician Prof. Dr. Slobodan Vujić to be a candidate for election to the title of foreign member of the Department of Mining, Geological and System Sciences within the Academy of Engineering Sciences of Serbia (AESS).

Yours Sincerely

Prof. Dr. Georgios N. Anastassakis

School of Mining and Metallurgical Engineering

### 3. БИОГРАФИЈА кандидата на српском језику



Професор Георгиос Анастасакис, 65, дипломирао је на Националном техничком универзитету у Атини (НТУА), водећем грчком универзитету у области технологије, образовања и истраживања. Професор је на Националном техничком универзитету у Атини (НТУА), Школско рударство и металуршко инжењерство, у области припреме минералних сировина и директор одговарајуће лабораторије. Каријеру је започео 1989. године као наставни кадар по уговору (1989-92); затим, запослен у LARCO GMMSA Ferronickel Co. (1992-94) на Одсеку за истраживање и развој, и изабран за предавача у НТУА 1994. Од тада је сукцесивно унапређиван у асистента, ванредног и редовног професора 2009. године.

**У наставној активности** предаје већи број предмета који се односе на питања припреме минералних сировина, (флотацијске концентрације сулфида и индустријских минерала), прераде финих и ултра финих честица, прераде јаловине, пречишћавање отпадних вода поступком флотацијске концентрације.

Руководио је више од 35 магистарских теза. Био је члан комисије у више од 70 завршних радова и мастер студија. Руководио је са 3 докторске тезе и био је члан комисије више од 20 пута за одбрану докторских дисертација. До сада је, самостално и у сарадњи са другим ауторима, објавио преко 130 научних радова у међународним часописима, девет књига од којих је 5 међународних.

У научно истаживачкој делатности професор Анастасакис је високо препознатљив у међународним круговима јер је био: рецензент у бројним истакнутим међународним часописима о припреми минералних сировина, површинској хемији и колоидима, питањима животне средине и одрживости, материјалима, хемијском инжењерству (преко 40 међународних часописа са високим IF), затим као рецензент бројних радова Зборника конгреса и симпозијума; члан Научног саветодавног одбора МіМеR (Рециклажа минерала и метала) истраживачког центра на Технолошком универзитету Lulea, Шведска (2002-4). Према *Scopus* сервису: Хиршов индекс h: 8, Број публикација: 21, Цитираност:556 У инжењерском и стручном раду током своје службе у НТУА био је супервизор финансираних истраживачких пројеката у вези са обогаћивањем грчког лигнита, унапређењем пловућца, пречишћавањем отпадних вода из рудника и металуршких постројења, факторима који утичу на стварање финих честица у ротационим пећима, уклањањем минерала арсена из никла. итд. Током свог повезивања са GMM SA LARCO Ferronickel Co., надгледао је 11 истраживачких пројеката.

У међународној сарадњи професор Анастасакис има изузетан допринос у области припреме минералних сировина не само у својој земљи већ и широм света. Члан је многих међународних научних друштава, као што су: Међународни (ІМРС), Балкански (ВМРС), Балканска академија наука о технологији минерала, Међународни организациони комитет Међународних конгреса за припрему угља – (ІСРС), Друштво професора рударства (SOMP, 2010-2018), Међународно удружење за чврсти отпад (ISVA) (2000-2010) (Нови Сад, Србија). Његов укупан рад и репутација као академског наставника су веома добро препознати о чему сведоче позиви да држи предавања по позиву о одрживости и другим темама. Међу њима, као говорник на семинарима које организује "FORGEA International (ИТАЛИЈА), Eski-Sehir (Турска), Marakeš (Мароко), Нататеt (Тунис),

У организационом раду обављао је дужност продекана (2014-2020), шефа Одсека за металургију и технологију материјала (2010-14) и члан неколико академских административних одбора НТУА, Грчке асоцијације рударских инжењера и металурга (1998-2000), итд. Такође, био је члан Грчке организације за акредитацију академских диплома (2008-2015), изабран је за члана Одбора директора Научног друштва технолога минералног богатства Грчке (1996-2014), изабран за члана Административног одбора Грчке асоцијације рударских инжењера и металурга (1998-2000), итд.

Сарадња са институцијама или појединцима у Србији: Сарађује са Техничким факултетом у Бору, Универзитета у Београду и Институтом за технологију нуклераних и других минералних сировина у Београду. Члан је редакционог одбора часописа за рударство и металургију, свеска А: Рударство, и Рециклажа и одрживи развој, у издању Универзитета у Београду — Технички факултет Бор, Србија. Од 20.10. до 24.10. 2024 на Криту, Грчка, одржава се међународни симпозијум у част истакнутог рада и животних достигнућа проф. Георгиоса Анастасакиса, познатог професионалца у области припреме минералних сировина на сајту овог симпозијума: <a href="https://www.flogen.org/sips2024/Georgios Anastassakis.php">https://www.flogen.org/sips2024/Georgios Anastassakis.php</a> налази се лого: Академије инжењерских наука Србије (АИНС), ИТНМС Београд, РИ Београд, и поменутих часописа ТФ у Бору, што најбоље осликава његову сарадњу са српским институцијама и појединцима.

## 4. Страница 5+5

### Проф. др ГЕОРГИУС АНАСТАССАКИС

## Најбољих 5 научних доприноса

- 1. **G.N. Anastassakis**, 1999. A study on the separation of magnesite fines by magnetic carrier methods, Colloids and Surfaces A: Physicochemical and Engineering Aspects, 149, pp. 585 593., IF=5,2, 58/161, ResearchGate Citations 44, https://dspace.lib.ntua.gr/xmlui/handle/123456789/30543
- 2. **G.N. Anastassakis**, 2005: Physicochemical factors affecting flocculation of pre-reduced nickeliferous laterite suspension, Separation and Purification Technology, 45, pp. 16-24., IF = 8,6. 14/143, ResearchGate Citations: 8, <a href="https://www.researchgate.net/publication/257561649">https://www.researchgate.net/publication/257561649</a> Physicochemical factors affecting flocculat ion\_of\_pre-reduced\_nickeliferous\_laterite\_suspension
- 3. C.A.C. Sequeira, D.M. Santos, Y. Chen, **G. Anastassakis**, 2008: Chemical metathesis of chalcopyrite in acidic solutions, Hydrometallurgy, 92, pp. 135-140., IF=4,7, 12/79, Citations: ResearchGate: 13

  <a href="https://www.researchgate.net/publication/248402370">https://www.researchgate.net/publication/248402370</a> Chemical metathesis of chalcopyrite in acidic solutions
- 4. **G. Anastassakis**, P. Bevilacqua, L. De Lorenzi, 2015. Recovery of residual copper from low-content tailings derived from waste electrical cable treatment, International Journal of Mineral Processing, 143, pp. 105-111., IF=2,778, 4/19, Citations: ResearchGate: 41, https://www.researchgate.net/publication/283110630 Recovery of residual copper from low-
- 5. Angelopoulos P.M., Koukoulis N., **Anastassakis G.N**., Taxiarchou M., Paspaliaris I., 2021 Selective Recovery of Graphite from Spent Potlining (SPL) by Froth Flotation. Journal of Sustainable Metallurgy. 2021; 7: 1589-1602., IF=2,4, 21/79, Web of Science Citations 14 <a href="https://doi.org/10.1007/s40831-021-00453-0">https://doi.org/10.1007/s40831-021-00453-0</a>, <a href="https://link.springer.com/article/10.1007/s40831-021-00453-0">https://link.springer.com/article/10.1007/s40831-021-00453-0</a>

## Најбољих 5 инжењерских доприноса

- 1. INCREASE of supply of BATTERy minerals by FLotAtIon of REE-rich apatite (BAT-PLUS) EIT Raw Materials, PN 19392, Duration: 15/6/2020-31/12/2020.
- 2. Supply of BATTERy Minerals Using Lignin Nanoparticles as FLotAtIon Collectors (Batterflai) EIT Raw Materials, PN 19089. Duration: 1/9/2019-31/12/2023.
- 3. Integrated Experimental procedure to recover Rare Earth Elements and Scandium from Bauxite residues -REEScue, MIS: 5174885. EU-Greece. Duration: 1/6/2022- 30/10/2023.
- 4. "Development of Hydrometallurgical process to recover metals from PCBs Pilot application: Zero-waste Process", Project No T1ΕΔΚ-00219 EU-Greece
- 5. Scientific coordinator of the Greek-Chinese bilateral research project "Separation and recovery of Inox steel from Dishwashers", Project No T7ΔKI-00364,

## 5. РЕЗИМЕ РЕЗУЛТАТА КАНДИДАТА

Име и презиме, датум и место рођења, завршен факултет, место и датум

Georgios N. Anastassakis, 27.04.1958., Athens, Greece, 1983:Diploma in Mining Engineering and Metallurgy, National Technical University of Athens

Тема Докторског рада: Thesis Title: Contribution to the beneficiation of the unaltered phosphate rock of Epirous area (Greece) ментор: late Professor Antonios Z. Frangiskos, датум одбране докторске тезе 13.07.1989 и факултет PhD in Mining Engineer and Metallurgy (Mineral Processing), National Technical Univ. of Athens (NTUA)

Запослење: најдуже, садашње; (за пензионере и датум пензионисања), институција и врста посла National Technical University of Athens (N.T.U.A.), School of Mining and Metallurgical Engineering, professor Област научног и инжењерског рада и ORCID идентификатор: Mineral Processing, Редовни професор 1989 Научни саветник \_\_\_\_\_ Дописни члан АИНС од \_\_\_\_\_ године.

1. Научно-истраживачки резултати (ПРИЛОЗИ 2 и 3 ПРАВИЛНИКА МИНИСТАРСТВА)

Они који конкуришу за редовне чланове уписују број до избора у дописног + број након избора (пример: 24+6)

м10 МОНОГРАФИЈЕ И МОНОГРАФСКЕ				TE C	Е СТУДИЈЕ			ТИ	П	M11	M12	M13	M14	
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	меъународни скупови			T	ИП	M3	1 1	M32	M33	M34	M35	M36		
M30				Б	POJ	34			47	3				
M40	НАЦИОНАЛНЕМОНОГРАФИЈЕ			T	ИП		1	M41	M42	M44	M45	M48	M48 M49	
17170				Ы	POJ									
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M50	ЧАСОПИСИ НАЦИОНАЛНИ			T	ТИП <b>М</b>		1 I	M52	M53	M54	M55			
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				Ы	POJ									
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	изведена дела		БРОЈ											
M100	НАГРАДЕ, СТУДИ ИЗЛОЖБЕ	IJE,	ТИП	M10	9 N	<b>I110</b>	M1	11	M112					
	HOMORADE		БРОЈ											
				L										

- 2. Цитираност (одређује се према SCOPUS-у)
- 2.1 Број цитираних радова на SCOPUS-у **21**
- 2.2 Укупан број цитата 556
- 2.3 Број хетероцитата \_\_\_\_
- 2.4 Цитираност у књигама \_\_\_\_, дисертацијама \_\_\_\_ и значајним иностраним публикацијама \_\_\_\_
- 2.5 Хиршов индекс (h-фактор) према броју хетероцитата **8** <a href="https://www.scopus.com/authid/detail.uri?authorId=6507703993">https://www.scopus.com/authid/detail.uri?authorId=6507703993</a>

# 3. Документоване инжењерске реализације (техничко-технолошки пројекти примењени у пракси) (потребе привреде подразумевају и инфраструктурне и јавне објекте

Р.Б	Активност	Главни	Извођачки	Технички	Остали
1.	Урађени значајни пројекти за потребепривреде		11		
2.	У потпуности изведени већи пројекти за потребе привреде (број пројеката је део од пројеката под 1.)				
3.	Број ревизија (рецензија ) привредних пројеката		Број експертских оцена 40		40
4.	Руковођење: Изградњом привредних објеката		Радом привред		
5.	Остало: (нпр. Извођење других пројеката, и др.)				

## 4. Остали показатељи успеха

1.	Награде међународне		4.	Рецензије WoS-SCI-IF радова	43
2.	Награде домаће		5.	Рецензије међународних пројеката	
3.	Уређивачки одбори часописа	12	6.	Чланство у научним и стр. удруж.	28

5. Доприноси развоју услов	а научно-истраживачког рада						
5.1 Формирање:	<ol> <li>Лабораторије _X</li> </ol>	2. Истраживачке групе					
3. Нови истраживачки правц	и	4. Центри изврсности					
<ol> <li>5.2 Менторство: Др 3</li> </ol>							
5.3 Педагошки рад: 1. Број уџбеника <b>9</b> 5. Мастер студије <i>&gt;</i> <b>35</b>	<ul><li>2. Збирка задатака 1 3. Број курсева:</li><li>6. Др студије &gt;20</li></ul>	а: 4. Основне студије >70					
5.4 Међународна сарадња: 1. Руковођење пројектима 2. Учешће на пројектима 10 3. Студијски боравак у иностранству дужи од 2 месеца: Invited Researcher in Columbia University (New York) – Dept. Earth and Environmental Engineering (working with Prof. P. Somasundaran)							
5.5 Одржавање 1. Председник програмског 3. Секретар програмског 5. Члан програмског <b>19</b> 2. /организационог одбора 4. Организационог одбора <b>12</b> 6. /организационог одбора							
6. Организација научног ра	ада						
6.1 Руковођење:	Домаћим пројектима						
6.2 Руковођење у Министарству науке: 1. Министар 2. Држ.сек. 3. Помоћник 4. Предс.МНО							
6.3 Руковођење у Инжењерск	кој комори: 1. Председник 2. Предс	Скупштине 3. Предс.Комисије _					
6.4 Активности у Министарству науке: 1. Матични одбори 2. Вођење комисија							
6.5 Руковођење научним инс	титуцијама:1. Универзитети2. Фак	ултети3. Институти					
4. Лабораторије <b>X</b> 5. Катедро	е 6. Одсеци, смерови						
6.6 Руковођење и активности у другим друштвима: 1. Научним <b>9</b> 2. Стручним <b>19</b>							

Датум

28. 06. 2024.

Потпис кандидата

## 6. БИОГРАФИЈА кандидата на енглеском језику



**Prof. Georgios Anastassakis**, 65, graduated from National Technical University of Athens (NTUA), the leading Greek University in technology, education and research. He is Professor at the National Technical University of Athens (NTUA), School Mining and Metallurgical Engineering, in the field of Mineral Processing and Director of the corresponding Laboratory. He graduated from NTUA 1983 and got his Doctoral degree in 1989. He started his career in 1989 as university teaching-associate by contract (198992), employed in LARCO GMMSA Ferronickel Co. (1992-94), and elected Lecturer in NTUA in 1994. Since then, he was successively promoted to Assistant, Associate and first-rank Professor in 2009.

In teaching activity un his teaching activities, he teaches a large number of subjects related to the preparation of mineral raw materials (flotation concentration of sulfides and industrial minerals), processing of fine and ultra-fine particles, tailings processing, wastewater treatment by flotation concentration. He supervised more than 35 Master's theses. He was a committee member in more than 70 final theses and master's studies. He supervised 3 doctoral theses and was a member of the committee more than 20 times for the defense of doctoral dissertations. So far, independently and in collaboration with other authors, he has published over 130 scientific papers in international journals, nine books of which 5 are international.

In the scientific research activity of prof. Anastasakis is highly recognized in international circles as he has been: a reviewer in numerous prominent international journals on mineral preparation, surface chemistry and colloids, environmental and sustainability issues, materials, chemical engineering (over 40 high IF international journals), then as a reviewer numerous works of Proceedings of congresses and symposia; member of the Scientific Advisory Board of the MiMeR (Recycling of Minerals and Metals) research center at Lulea University of Technology, Sweden (2002-4). According to *Scopus*: h index: 8, number of publications: 21, citations: 556

**In engineering and professional work** during his service in NTUA he has been the supervisor of funded research projects related to the beneficiation of Greek lignites, up-grade of pumice, effluent purification from mines and metallurgical plants, factors affecting fine particle generation in rotary kilns, arsenic minerals removal from nickeliferous etc. During his affiliation with GMM SA LARCO Ferronickel Co., he was supervising 11 research projects.

In international cooperation Professor Anastasakis has made an outstanding contribution to the field of mineral processing not only in his country but throughout the world. He is a member of many international scientific societies, such as: International (IMPC), Balkan (BMPC), Balkan Academy of Mineral Technology Sciences, International Organizing Committee of International Coal Preparation Congresses - (ICPC), Society of Mining Professors (SOMP, 2010-2018), International Solid Waste Association (ISVA) (2000-2010) (Novi Sad, Serbia). His overall work and reputation as an academic teacher is very well recognized as evidenced by invitations to lecture on sustainability and other topics. Among them, as a speaker at seminars organized by "FORGEA International (ITALY), Eski-Sehir (Turkey), Marrakesh (Morocco), Hammamet (Tunisia).

In organizational work He served as Vice-Dean (2014-2020), Head of the Department of Metallurgy and Materials Technology (2010-14) and member of several academic administrative committees of NTUA, Greek Association of Mining Engineers and Metallurgists (1998-2000), etc. Also, he was a member of the Greek Organization for the Accreditation of Academic Degrees (2008-2015), he was elected as a member of the Board of Directors of the Scientific Society of Mineral Resources Technologists of Greece (1996-2014), elected member of the Administrative Board of the Greek Association of Mining Engineers and Metallurgists (1998-2000), etc.

Cooperation with institutions or individuals in Serbia: It cooperates with the Faculty of Technology in Bor, the University of Belgrade and the Institute for Technology of Nuclear and Other Mineral Resources in Belgrade. He is a member of the editorial board of the Journal of Mining and Metallurgy, Volume A: Mining, and Recycling and Sustainable Development, published by the University of Belgrade - Technical Faculty Bor, Serbia. From 20.10. until 24.10. In 2024, an international symposium will be held in Crete, Greece, in honor of the outstanding work and life achievements of Prof. Georgios Anastasakis, a well-known professional in the field of mineral raw materials preparation and its application in sustainable development. On the website of this symposium there is a logo: Academy of Engineering Sciences of Serbia, Institute for Technology of Nuclear and Other Mineral Resources Belgrade, Mining Institute, Belgrade, and the aforementioned TF magazines in Bor, which best illustrates his cooperation with Serbian institutions and individuals (https://www.flogen.org/sips2024/Georgios\_Anastassakis.php).

## 7. БИБЛИОГРАФИЈА са проширеном биографијом

Линкови на научне и друге публикације, као и биографске податке:

## ОБАВЕЗНИ:

Scopus; https://www.scopus.com/authid/detail.uri?authorId=6507703993

Хиршов индекс h: 8, Број публикација: 21, Цитираност:556

**KoBSON:** Проф. др Георгиос Анастассакис нема профил на овој цитатној бази

**Web of Science:** Проф. др Георгиос Анастассакис нема профил на овој цитатној бази

опциони:

ResearchGate: <a href="https://www.researchgate.net/profile/Georgios-Anastassakis">https://www.researchgate.net/profile/Georgios-Anastassakis</a>

Хиршов индекс h: 8, Број публикација: 39, Цитираност: 686

Библиографија свих радова налази се у наставку.

### ИЗБОРИ АИНС 2024

### Одељење за рударске, геолошке и системске науке

### инострани члан

## Проф. др Георгиос Анастассакис

#### БИБЛИОГРАФИЈА

### I НАУЧНО-ИСТРАЖИВАЧКИ РЕЗУЛТАТИ (Scientific Papers)

Категорија M20: **Радови објављени у научним часописима мађународног значаја**; научна критика; уређивање часописа

## М21а Рад у међународном часопису изузетних вредности

- 1. G.N. Anastassakis, 2005: Physicochemical factors affecting flocculation of pre-reduced nickeliferous laterite suspension, Separation and Purification Technology, 45, pp. 16-24., IF = 8,6. 14/143, ResearchGate Citations: 8, <a href="https://www.researchgate.net/publication/257561649">https://www.researchgate.net/publication/257561649</a> Physicochemical factors affecting flocculat ion\_of\_pre-reduced\_nickeliferous\_laterite\_suspension
- 2. K. Karageorgiou, M. Paschalis and **G.N. Anastassakis**, 2007: Removal of phosphate species from solution onto calcite used as natural adsorbent, Journal of Hazardous Materials, A139, pp. 444-452., IF=13,6, 16275, M21a, <a href="https://www.scribd.com/document/349030809/Removal-of-Phosphate-Species-From-Solution-by-Adsorption-Onto-Calcite-Used-as-Natural-Adsorbent">https://www.researchgate.net/publication/7183363</a> Removal of Phosphate Species from Solution by Adsorption onto Calcite Used as Natural Adsorbent

## М21 Рад у врхунским међународним часописима

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- 2. **G. Anastassakis**, P. Bevilacqua, L. De Lorenzi, 2015. Recovery of residual copper from low-content tailings derived from waste electrical cable treatment, International Journal of Mineral Processing, 143, pp. 105-111., IF=2,778, 4/19, Citations: ResearchGate: 41, <a href="https://www.researchgate.net/publication/283110630\_Recovery\_of\_residual\_copper\_from\_low-content\_tailings\_derived\_from\_waste\_electrical\_cable\_treatment">https://www.researchgate.net/publication/283110630\_Recovery\_of\_residual\_copper\_from\_low-content\_tailings\_derived\_from\_waste\_electrical\_cable\_treatment</a>
- 3. Angelopoulos P.M., Koukoulis N., **Anastassakis G.N**., Taxiarchou M., Paspaliaris I., 2021 Selective Recovery of Graphite from Spent Potlining (SPL) by Froth Flotation. Journal of Sustainable Metallurgy. 2021; 7: 1589-1602., IF=2,4, 21/79, Web of Science Citations 14 <a href="https://doi.org/10.1007/s40831-021-00453-0">https://doi.org/10.1007/s40831-021-00453-0</a>, <a href="https://link.springer.com/article/10.1007/s40831-021-00453-0">https://link.springer.com/article/10.1007/s40831-021-00453-0</a>
- 4. P.M. Angelopoulos, P. Oustadakis, **G. Anastassakis**, M. Pissas, M. Taxiarchou, 2024. Iron recovery from BR residue through magnetic separation; effect of endogenous properties and processing conditions, Minerals Engineering (under review, MINE-D-24-00733), IF=4,8, 4/20, M21, https://ezproxy.nb.rs:2058/servisi.131.html?jid=367516

## М22 Рад у истакнутом међународном часопису

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- 2. **G.N. Anastassakis**, 2004: Beneficiation of the Greek lignites, Coal Preparation, Vol. 124, issues 1-2, pp. 19-34., IF=2,1, 11/24, ResearchGate: Citations 9, https://www.researchgate.net/publication/233501609 Beneficiation of the Greek Lignites
- 3. Triantafyllidis, S.S., **Anastasakis, G.**, Papanastasiou, A., Stylianou, C., Kavros, N., Pappa, F.K., Tombros, S.F., Fitros, M. & Skliros, V., 2024. Provenance of coastal and seabed sediments relative to mining and processing wastes: the case of Lavrion, Attiki Peninsula, Greece. Minerals, 14, 33. IF=2,5, 8/20, ResearchGate: Citations 0 https://doi.org/10.3390/min14010033.,

## М23 – Рад у међународном часопису

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  <a href="https://www.researchgate.net/publication/250349040">https://www.researchgate.net/publication/250349040</a> Electrochemical and Surface Analytical St udies of Silver Deposits for Industrial Electroplating
- 3. N. Georgiou, **G.N. Anastassakis**, 2016. Decontamination of diesel-polluted soil through flotation, Environmental Engineering & Management Journal (EEMJ), 15(2), pp. 381-388. IF=1,1 264/275, ResearchGate: Citations: 0 https://eemj.eu/index.php/EEMJ/article/view/2849

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- 2. **G.N. Anastassakis**, 1990. Influence of starch on phosphate rock flotation by using sodium oleate collector, Mining and Metallurgical Annals, 74, pp. 15 24 (in Greek with English abstract).
- 3. **G.N. Anastassakis**, 1992. Influence of sodium silicate (as calcite depressant) on phosphate rock flotation using sodium oleate collector, Mineral Wealth J., 79, pp. 55 66 (in Greek with extended English summary).
- 4. **G.N. Anastassakis**, 1993. Influence of hydrodynamics on rougher flotation of antimonite, Mining and Metallurgical Annals, 3(2-3), pp. 51-64 (in Greek with English summary).
- 5. **G.N. Anastassakis** and G. Stamboltzis, 1993. Hydrodynamics of flotation cells with external air blow, Mining and Metallurgical Annals, 3(1), pp. 39 53 (in Greek with English summary).
- 6. **G.N. Anastassakis**, E.P. Chammas and A.Z. Frangiskos, 1995. A study on the beneficiation of Milos island (Greece) volcanic tuff for the production feldspar and barite concentrate by using flotation and magnetic separation methods, Mineral Wealth J., 95, pp. 7 16 (in Greek with extended English summary).
- 7. E. Chammas, Em. Hondrellis, H. Iskou, D. Tamam, **G.N. Anastassakis**, A.Z. Frangiskos and Em. Frogoudakis, 1999. A study on the beneficiation of lignite of Servia area (Kozani, Northern Greece) by heavy media separation, Mineral Wealth J., 112, pp. 17 28 (in Greek with extended English summary).
- 8. **G.N. Anastassakis**, 1999. Mineral processing techniques and environmental protection, Mineral Wealth J., 113, pp. 33 46 (in Greek with extended English summary).
- 9. E. Chammas, Em. Hondrellis, **G.N. Anastassakis** and A.Z. Frangiskos, 2000. A study on the beneficiation of coal from Servia area (Kozani, Northern Greece) by jigging and tabling, Mineral Wealth J., 115, pp. 17 28 (in Greek with extended English summary).
- 10. C.A.C. Sequeira and **G.N. Anastassakis**, 2004: Solid-state electrochemical sensors for the metallurgical industry, Mineral Wealth, issue 131, p. 47-55.
- 11. **G.N. Anastassakis**, K. Karageorgiou and M. Paschalis, 2004: Removal of phosphate species from solution by flotation, Proceedings of REWAS '04, Global Symposium on Recycling, Waste

- Treatment and Clean Technology, I. Gaballah, B. Mishra, R. Solozabal and M. Tanaka (Eds.), TMS-Inasmet, Volume II, pp. 1147-54.
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- 15. K. Karageorgiou, M. Paschalis, **G.N. Anastassakis**, 2009. Removal of orthophosphate species from aqueous solution with flotation using dodecylamine collector, Proceedings of XIII Balkan Mineral Processing Congress, Eds. S. Krausz, L. Ciobanu, N. Cristea, V. Ciocan, G. Christae, Publisher Focus Petrosani, Romania, Vol. 1, pp. 227-233.
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- 18. **G.N. Anastassakis**, 2010. Coal deposits in Greece Current status and prospects for coal preparation, CPSA Journal The Magazine by the Coal Preparation Society of America, 9(1).
- 19. **G.N. Anastassakis**, 2011. Hydrodynamic Modeling and Optimization of Processes in Flotation Cells with External Air-blow, Knovel, Engineering Cases Where Theory Meets Practice, <a href="http://engineeringcases.knovelblog.com">http://engineeringcases.knovelblog.com</a> (4-2-2011)
- 20. **G. Anastasakis**, 2014. On the processing of fine mineral particles: A review, The Journal of Ore Dressing, 16(32), pp. 1-10.
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- 22. M. Sakaroglou, **G.N. Anastassakis**, 2017. Nickel recovery from electric arc furnace slag by magnetic separation, Journal of Mining and Metallurgy, Section A: Mining, 53(1), pp. 3-15.
- 23. **G.N. Anastassakis**, C.A.C. Sequeira, 2018. Agglomeration-assisted separation of fine value mineral particles from mineral gangue, Paper no 629, XXIX International Mineral Processing Congress Proceedings, Moscow, September 15-21, 2018.
- 24. G.-M. Bimpilas, G.N. Anastassakis, 2020. Magnesite beneficiation methods: A review, Sustainable Extraction and Processing of Raw Materials Journal, 1, pp. 14-20.
- 25. E. Evangelou, **G.N. Anastassakis**, S.-D. Karamoutsos and A. Stergiou, 2021. Components' Characterization of End-of-Life Dishwashers, Materials Proceedings 2021, 5(1), <a href="https://doi.org/10.3390/materproc2021005084">https://doi.org/10.3390/materproc2021005084</a>
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- 26. N. Koukoulis, **G.N. Anastassakis**, 2022. Reprocessing of Magnesite Beneficiation-Waste to Recover Mineral Value and Minimize Environmental Footprint, Sustainable Extraction and Processing of Raw Materials Journal, pp. 49-55
- 27. Angelopoulos P.M., **Anastassakis G.**, Kountouris N., Taxiarchou M., Koutsotheodorou E., Pefkos T., Klepkos V., Samara C., Mprokos G., 2023 Flotation of Sulphide Minerals Using Organosolv Lignin as Collector-Pilot-Scale Trials. Material Proceedings. 2023; 15, 81. <a href="https://doi.org/10.3390/materproc2023015081">https://doi.org/10.3390/materproc2023015081</a>
- 28. Evangelou, E.; **Anastassakis, G.N.**; Karamoutsos, S.-D.; Stergiou, 2023. A. Recovery of Stainless Steel from End-of-Use Dishwashers, Material Proceedings, 15, <a href="https://doi.org/10.3390/materproc2023015057">https://doi.org/10.3390/materproc2023015057</a>.

- 29. X. Simos, M. Papageorgiou, I. Kitsou, M. E. Mamassi, T. Gikarakis, A. Ekonomakou, A. Amanatidis, G. N. Anastassakis, A. Tsetsekou, 2023, Materials Proceedings, 15, 84. <a href="https://doi.org/10.3390/materproc2023015084">https://doi.org/10.3390/materproc2023015084</a>.
- 30. Koukoulis, N., **Anastassakis G.N.**, 2024. Recovery of mineral fines through hydrophobic agglomeration processes, Invited paper for the Special Issue: Sustainable Mining and Processing of Mineral Resources, Sustainability, Publisher mdpi (under review).

## М30 Зборници међународних научних скупова

## Категорија M31: Рад по позиву саопштен на међународном скупу штампан у целини (papers by invitation)

- 1. Innovations on Advanced Flotation Technology (NATO-ASI Seminar, Greece, 1991).
- 2. 4<sup>th</sup> Seminar E.C. Workshop on Mineral Processing, Extractive Metallurgy and Recycling (Greece, 1993).
- 3. Mineral Processing and Environment: Improving the quality of our life (NATO-ASI Seminar, Varna Bulgaria, 1996).
- 4. Assessment and Promotion of the use of the new technologies on European Lignites and Brown Coal (THERMIE Workshop, Greece, 1997).
- 5. 3rd European Workshop on Chemistry, Energy and the Environment (Estoril Portugal, 1997). Paper presentation entitled "Removal of ions from industrial and municipal waste waters by flotation methods Application on the removal of lead" (included in the Proceedings)
- 6. 9th Intern. Congress on Surface and Colloid Science (Sofia Bulgaria, 1997). Paper presentation entitled "Study on the separation of magnesite fines by magnetic carrier methods (published in: Colloids and Surfaces A Physicochemical and Engineering Aspects). IF=5,2, 58/161, M=22, https://ezproxy.nb.rs:2058/servisi.131.html?jid=366832
- 7. NATO Advanced Research Workshop on "Application of Natural Microporous Materials to the Environmental Technology" (Smolenice Slovakia, 1998).
- 8. XXI International Mineral Processing Congress (Rome Italy, 2000). Paper presentation entitled "Hydrodynamics of conventional flotation cells with external air blow and its effect on metallurgical results".
- 9. 13th International Symposium on Surfactants in Solution (SIS-2000) (Florida USA, 2000). Paper presentation entitled "Separation of fine mineral particles by selective magnetic coating".
- 10. Workshop "New Deal for Recycling" (Rome Italy, 2001). **Invited paper presentation** entitled "Design of an integrated resource management system for raw materials conservation. Present status and incentives for future research".
- 11. IX Balkan Mineral Processing Congress, Istanbul 11 13 September 2001. Paper presentation entitled "Beneficiation of Greek lignites. The case of the lignite deposit of Servia area (Kozani, Macedonia Greece) and co-author in another paper.
- 12. TMS Fall 2002 Extraction and Processing Division Meeting on Recycling and Waste Treatment in Mineral and Metal Processing: Technical and Economic Aspects, 16 20 June 2002, Lulea, Sweden. Paper presentation and co-author in another paper.
- 13. Technical Univ. of Cape Town, Dec. 2001. Co-author in the invited lecture by Prof. P. Somasundaran entitled "Interactions of gum depressants with tale: Study of adsorption by spectroscopic and allied techniques".
- 14. XXII International Mineral Processing Congress, Cape Town, S. Africa, September 28 October 3, 2003. Paper Presentation entitled "Physicochemical behavior of chromite and olivine during flotation with anionic collectors". (Oral-Poster Presentation)
- 15. REWAS 2004 Global Symposium on Recycling, Waste Treatment and Clean Technology, Madrid, Spain, September 26 29, 2004. Paper Presentation entitled "Removal of phosphate species from solution by flotation.
- 16. XXIII International Mineral Processing Congress, Istanbul, Turkey, September 3-8, 2006. Paper Presentation entitled "Electro-osmotic dewatering of red mud slurry".
- 17. XII Balkan Mineral Processing Congress, Delphi, Greece, June 10-14, 2007 (Congress Chairman).

- 18. 2nd International Conference on Engineering for Waste Valorization "WasteEng2008", 3-5 June 2008, Patras, Greece. Poster presentation entitled "Electro-dewatering of red mud slurry for waste volume reduction and solids valorization".
- 19. XXIV International Mineral Processing Congress, Beijing, China, September 23-28, 2008. Paper Presentation entitled "Fine particles separation through hydrophobic agglomeration. Application on the system magnesite/quartz".
- 20. REWAS 2008 Global Symposium on Recycling, Waste Treatment and Clean Technology, Cancun, Mexico, October 12 15, 2008. **Keynote Lecture** entitled "Purification of oil-contaminated soil by flotation".
- 21. XIII Balkan Mineral Processing Congress, Bucharest, Romania, 14-17 June 2009, Paper Presentation entitled "Removal of orthophosphate species from aqueous solution with flotation using dodecylamine collector".
- 22. **Invited speaker** in the following 10 Seminars **organized by FORGEA International (ITALY)** Training and Cooperation Centre in the field of Geomining and Environment: a) Sardinia, Italy: October 2010, December 2011, March 2012, October 2012, and May 2013 b) Eski-Sehir, Turkey, March 2011, and November 2013 c) Marakesh, Morocco, November 21-23, 2011, d) Hammamet, Tunisia: February 2013, and February 2014. The topics developed were the following: Integrated pollution prevention in industry; Land contamination from mining operations: Prevention strategies and polluted sites management; Industrial waste characterization; Tailings management from mineral processing operations: I. Dam design, safety and legislation items, and II. Application on waste from phosphate rock beneficiation; Energy production: renewable vs. non-renewable sources; Industrial and municipal solid waste; Waste management: disposal and treatment; Primary raw materials used in ceramic industry: minerals, specifications and beneficiation methods; ceramic production steps and fundamentals.
- 23. XV Balkan Mineral Processing Congress, Sozopol, Bulgaria, 12-16 June 2013, oral presentation entitled: Recovery of magnesite from waste material rejected before hand-sorting.
- 24. 13th International Geological Congress, Chania, Greece, 5-8 Sept. 2013, oral presentation entitled: Relationship between phosphates mineralogy and mineral processing The case of Greece.
- 25. **Invited speaker** in the 14th International Mineral Processing Symposium, 15-17 October 2014, Kusadasi, Turkey. Title of presentation: Separation of mineral fine particles.
- 26. **Invited speaker** in the 9th International Industrial Minerals Symposium, 14-15 May 2015, Izmir, Turkey. Title of presentation: Phosphate as an industrial mineral: applications, mineralogy and processing methods.
- 27. XVI Balkan Mineral Processing Congress, Belgrade, Serbia, 17-19 June 2015, poster presentation: Feldspar-containing rocks of Greece: Mineralogical characteristics and processing flow-sheets.
- 28. XVIII International Coal Preparation Congress, 28 June-01 July 2016, St. Petersburg, Russia, oral presentation entitled: Amenability of representative Greek lignite deposits to beneficiation. An overview
- 29. XXVIII IMPC, 11-15 September 2016, Quebec City, Canada: a) oral presentation entitled: Magnetic separation of fine gangue minerals from magnesite as hydrophobic co-agglomerates, b) poster presentation entitled: Copper recovery from electric cable scrap by shaking tables.
- 30. **Invited speaker** in the International Solid Waste Association (ISWA) 2016, 19-21 September 2016, Novi Sad, Serbia, Title of presentation: Waste management from mineral processing operations: The case of phosphate rocks.
- 31. <u>E. Evangelou</u>, **G.N. Anastassakis**, S. D. Karamoutsos, A. Stergiou, "Waste from Electrical Equipment: Characterization of Recycled Dishwashers", full paper submitted and published in the Proceedings of 7<sup>th</sup> International Conference on Industrial and Hazardous Waste Management, Chania, Crete, 27-30 July 2021. <u>Oral presentation</u>.
- 32. <u>E. Evangelou</u>, **G.N. Anastassakis**, S. D. Karamoutsos, A. Stergiou, International Conference on Raw Materials and Circular Economy (RawMat 2021), Athens, September 05-09, 2021, <u>Poster Presentation</u>.
- 33. <u>E. Evangelou</u>, **G.N. Anastassakis**, S. D. Karamoutsos, A. Stergiou RawMat2023 2nd International Conference on Raw Materials and Circular Economy, "Raw Materials: setting the foundations for the Green Transition", Athens, Greece, 28 Aug 02 Sept 2023, <u>Poster Presentation</u>.
- 34. <u>Angelopoulos P.M.</u>, Oustadakis P., **Anastassakis G.**, Georgiou M., Kountouris N., Taxiarchou M. Hydrothermal Treatment of Bauxite Residue for Iron Recovery Enhancement by Magnetic

Separation. In: XV International Mineral Processing and Recycling Conference (IMPRC23), <u>Poster Session</u>, Belgrade, Serbia; 2023.

## М33 Саопштење са међународног скупа штампано у целини

- 1. **G.N. Anastassakis**, 1989. Contribution in the beneficiation of the unaltered phosphate rock of Epirous area (Greece), PhD Thesis, Dept. Mining and Metallurgical Engineering, NTUA.
- 2. **G.N. Anastassakis**, 1990. Zeta-potential and its applications on Mineral Processing, Mining and Metallurgical Annals, 75, pp. 29 40 (in Greek with English abstract).
- 3. Anders M., J. Burchardt, E. Reicherz, J. Spiekermann, C. Fotakis, S. Couris, J. Hadjinikolaidis, E. Frogoudakis, G. Anastassakis, A. Polydorou, T. El. Gammal, K. Mavrommatis, D.C. Papamantellos, G.N. Angelopoulos, D. Diamantopoulos, N. Diamianakis, E. Diakoumakos, A. Enotiadis, A. Fitas, 1993: "Development of an Automatic System for Controlling the Process of Metal Recovery from Slags" E.C. Contractors' Workshop on Processing and Recycling, Delfi, November 2-5, 1993, 31-51.
- 4. **G.N. Anastassakis** and D. Tamam, 1997. Removal of ions from industrial and municipal waste waters by flotation methods Application on the removal of lead, in: Chemistry, Energy and the Environment, C.A.C. Sequeira and J.B. Moffat (Eds.), The Royal Society of Chemistry, Cambridge, UK, pp. 435 445.
- 5. **G.N. Anastassakis**, E. Zafiriadou and H. Iskou, 1998. Physicochemical behavior of minerals during chromite flotation with fatty acids, Honorary volume in the memory Prof. K. Konofagos, NTUA Press, pp. 177 185 (in Greek with English summary).
- 6. **G.N. Anastassakis**, 2000. Hydrodynamics of conventional flotation cells with external air blow and its effect on metallurgical results, XXI IMPC Proceedings, P. Massacci (Editor), Elsevier, Amsterdam, Vol. B, pp. 64 70.
- 7. **G.N. Anastassakis**, 2001. Fine particles separation by using physicochemical methods, Honorary volume in the memory Prof. J. Papageorgakis, pp. 17 34.
- 8. E. Chammas, D. Panias, M. Taxiarchou, **G.N. Anastassakis** and I. Paspaliaris, 2001. Removal of iron and other major impurities from silica sand for the production of high added value materials, Proceedings IX Balkan Mineral Processing Congress "New Developments in Mineral Processing", G. Önal, S. Atak, A. Güney, M. Celik, A.E. Yüce (Eds.), pp. 289 295.
- 9. E. Chammas, H. Iskou, Em. Hondrellis, D. Tamam, **G.N. Anastassakis**, A.Z. Frangiskos and Em. Frogoudakis, 2001. Beneficiation of Greek lignite. The case of the lignite deposit of Servia area (Kozani, Macedonia Greece), extension of the Proceedings IX Balkan Mineral Processing Congress "New Developments in Mineral Processing", G. Önal, S. Atak, A. Güney, M. Celik, A.E. Yüce (Eds.), pp. 711 720.
- 10. **G. Anastassakis**, 2002. Design of an integrated resource management system for total resource recovery. Technical/ Economical problems and future perspectives, Proceedings TMS Fall 2002 Congress on Recycling and Waste Treatment in Mineral and Metal Processing: Technical and Economic Aspects, B. Bjorkman, C. Samuelsson, J-O Wiksström (Eds.), Vol. 1, pp. 199 208.
- 11. C.A.C. Sequeira, N.R. Sousa, R.P.C. Neto and **G. Anastassakis, 2002.** Electrochemical oxidation of hydrosulphide ions in aqueous media, TMS Fall 2002 Congress on Recycling and Waste Treatment in Mineral and Metal Processing: Technical and Economic Aspects, B. Bjorkman, C. Samuelsson, J-O Wiksström (Eds.), Vol. 1, pp. 663 670.
- 12. **G.N. Anastassakis** and Charis Dolgyras, 2003: Quartz recovery from the tailings of nickeliferous laterite processing, Proceedings X Balkan Mineral Processing Congress "Mineral Processing in the 21st Century", L. Kuzev, I. Nishkov, A. Boteva and D. Mochev (Eds.), pp. 676-681.
- 13. P. Somasundaran, J. Wang, Z. Pan, D.R. Nagaraj, T. Chen and **G. Anastassakis**, 2003: Interactions of gum depressants with tale: Study of adsorption by spectroscopic and allied techniques, Proceedings XXII IMPC, Vol. 2, pp. 912 919.
- 14. **G.N. Anastassakis**, 2003: Physicochemical behavior of chromite and olivine during flotation with anionic collectors, XXII International Mineral Processing Congress, Cape Town, S. Africa, September 28 October 3, 2003. (Oral-Poster Presentation)
- 15. **G.N. Anastassakis**, 2005. The physico-chemistry of flocculation with polyelectrolytes, Honorary volume to Prof. A.Z. Frangiskos, pp. 113-128 (in Greek with English abstract).

- 16. C.A.C. Sequeira, R.F. Lobo and **G.N. Anastassakis**, 2005: A study of the Redox chemistry of anthraquinone 2.7-disulphonate, Proceedings of the 1st International Conference on Diffusion in Solids and Liquids (DSL-2005), A. Ochster, J. Gracio and F. Barlat (Eds.), University of Aveiro, Portugal, 6-8 July, Vol. II, pp. 655-658.
- 17. C. Dolgyras, **G.N. Anastassakis**, K. Kavouridis, N. Koukouzas, E. Kakaras and F. Pavloudakis, 2005: Demineralization of Greek lignite from Ptolemais and Florina, North Greece, Proceedings of International Conference on Coal Science and Technology (ICCST), Okinawa, Japan, paper 3P202, October 2005.
- 18. M.B. Frangiskos, **G.N. Anastassakis** and A.Z. Frangiskos, 2006: Electro-osmotic dewatering of red mud slurry, in: Proceedings of XXIII IMPC, G. Onal et al (Eds.), Vol. 2, pp. 1667-71.
- 19. E. Hristoforou, **G.N. Anastassakis**, K. Efthymiades, 2007: Selective magnetic separation by means of temperature and frequency, in: Proceedings XII Balkan Mineral Processing Congress (BMPC), **G.N. Anastassakis** (Ed.), pp. 161-166.
- 20. Y. Chen, **G.N. Anastassakis**, C.A.C. Sequeira, 2007: Chemical metathesis of chalcopyrite in sulfuric acid, in: Proceedings XII Balkan Mineral Processing Congress (BMPC), G.N. Anastassakis (Ed.), pp. 517-521.
- 21. C.A.C. Sequeira, **G.N. Anastassakis**, 2007: Potential-pH diagram for the sulfur-water system at ambient temperature, in: Proceedings XII Balkan Mineral Processing Congress (BMPC), G.N. Anastassakis (Ed.), pp. 615-619
- 22. N. Tsoni, **G.N. Anastassakis**, 2008: Fine particles separation through hydrophobic agglomeration. Application on the system magnesite/quartz, Proceedings XXIV IMPC, Beijing, China, 23-28 Sept. 2008.
- 23. **G.N. Anastassakis**, N. Georgiou, 2008: Purification of oil-contaminated soil by flotation, Proceedings REWAS 2008, Cancun, Mexico, 12-15 October 2008.
- 24. **G.N. Anastassakis**, 2009. Mineral resources conservation through improving fine particles recovery with Mineral Processing methods, Proceedings of The 3rd International Seminar ECOMINING Europe in the 21st Century, Milos Island, Greece, 4-5 September 2009, pp. 85-94.
- 25. G. Raftopoulos, G. Katsoulas, G.N. Anastassakis, 2012. Pilot implementation of separate municipal solid waste collection system in Greek Universities. Application at National Technical University of Athens (NTUA), Proceedings of International Conference on Sustainable Solid Waste Management, June 28-29 2012, Athens, Greece.
- 26. E. Dimopoulos, **G.N. Anastassakis**, 2013. Recovery of magnesite from waste material rejected before hand-sorting, Proceedings of XV Balkan Mineral Processing Congress, Sozopol, Bulgaria, 12-16 June 2013.
- 27. **G.N. Anastassakis**, 2013. Relationship between phosphates mineralogy and mineral processing The case of Greece. Bulletin of the Geological Society of Greece, vol. XLVII 2013, Proceedings of the 13th International Congress, Chania, Greece, 5-8 Sept. 2013.
- 28. M. Tsezos, **G. Anastassakis**, V. Kapsimalis, N. Xirokostas, 2014. Management of dredged material in Greek ports and its disposal at the sea, Proceedings 6th Pan-Hellenic Congress of Harbour Works. Lab of Harbour Works, School of Civil Engineering, November 11-14, 2014, Athens, 10p.
- 29. **G.N. Anastassakis**, 2014. Separation of mineral fine particles, Proceedings of 14th International Mineral Processing Symposium, 15-17 October 2014, Kusadasi, Turkey, U. Ipekoglu, V. Arslan, S. Sen (eds.), pp. 27-34.
- 30. **G.N. Anastassakis**, 2015. Feldspar-containing rocks of Greece: Mineralogical characteristics and processing flow-sheets, Proceedings of XVI Balkan Mineral Processing Congress, Belgrade, Serbia, 17-19 June 2015, N. Calic, L. Andric, I. Milanovic, I. Simovic (eds), pp. 565-572.
- 31. **G.N. Anastassakis**, 2016. Amenability of representative Greek lignite deposits to beneficiation. An overview, Proceedings XVIII International Coal Preparation Congress, 28 June-01 July 2016, St. Petersburg, Russia, Springer, vol. 2, pp. 803-808.
- 32. G. Bimpilas, G.N. Anastassakis, 2016. Magnetic separation of fine gangue minerals from magnesite as hydrophobic co-agglomerates, Paper No 338, XXVIII International Mineral Processing Congress Proceedings ISBN: 978-1-926872-29-2, Published by the Canadian Institute of Mining, Metallurgy and Petroleum.
- 33. C.-M. Katsari, **G.N. Anastassakis**, 2016. Copper recovery from electric cable scrap by shaking tables, Paper No 339, XXVIII International Mineral Processing Congress Proceedings ISBN: 978-1-926872-29-2, Published by the Canadian Institute of Mining, Metallurgy and Petroleum.

- 34. **G.N. Anastassakis**, 2016. Waste management from mineral processing operations: The case of phosphate rocks, Proceedings of International Solid Waste Association, 19-21 September 2016, Novi Sad, Serbia.
- 35. C.A.C Sequeira, **G.N. Anastassakis**, 2018. Gas bubbling in copper electrowinning from cuprous chloride solutions, Paper no 630, XXIX International Mineral Processing Congress Proceedings, Moscow, September 15-21, 2018.
- 36. S. Karamoutsos, A. Stergiou, E. Remoundaki, S. Agatzini-Leonardou, **G.N. Anastassakis**, P. Oustadakis, P. Kousi, A. Chatzikiosegian, P. Tsakiridis, and M. Tsezos, 2018. Integrated method of hydrometallurgical metal recovery and waste waters biological treatment with zero emissions, 6th International Conference on Industrial and Hazardous Waste Management, 4-7 September, 2018, Chania, Crete.
- 37. P.M. Angelopoulos, N. Koukoulis, **G. Anastassakis**, M. Taxiarchou, 2020. Preliminary study on the separation of the components from aluminum spent pot lining (SPL) through heavy liquid tests, to be published in the Proceedings of the 3rd International Bauxite Residue Valorization and Best Practices Conference, 28 September 2 October, 2020 (virtual conference).
- 38. G. Tsekeris, **G.N. Anastassakis**, 2022. Municipal Solid Waste-to-Energy in EU-27 towards a Circular Economy, Recycling and Sustainable Development, 15, pp. 83-96.
- 39. Angelopoulos P.M., Koukoulis N., **Anastassakis G.N.,** Taxiarchou M., 2022. Preliminary study on the separation of the components from aluminum spent pot lining (SPL) through heavy liquid tests. In: Proceedings of the 3rd International Conference BR2020 Bauxite Residue Valorization and Best Practices Conference. Virtual Conference; pp. 163–9.
- 40. Angelopoulos P.M., **Anastassakis G.**, Kountouris N., Koukoulis N., Taxiarchou M., 2023 Combined use of organosolv lignin and xanthates on sphalerite flotation from mixed sulphides. In: Proceedings of the XV International Mineral Processing and Recycling Conference. Belgrade, Serbia; 2023. DOI: https://doi.org/10.5281/zenodo.8073380
- 41. Angelopoulos P.N., Kountouris N., **Anastassakis G.,** Taxiarchou M., 2023. Partial replacement of xanthate by organosolv lignin on pyrite/arsenopyrite flotation. In: Proceedings of the XV International Mineral Processing and Recycling Conference. Belgrade, Serbia; 2023. DOI: 10.5281/zenodo.8073418
- 42. Koukoulis, N., **Anastassakis, G.N.** 2023. Coal mining in Greece: Current condition and future trends, Proceedings of XX International Coal Preparation Congress-Advancing Technology Beyond Best Practice, Ed. D. Mathewson, Australian Coal Preparation Socety Ltd., paper 7A, pp. 249-257.
- 43. Razis A., **Anastassakis G.N.**, 2023. Establishment of Deposit Refund System in Greece for PET bottles: Economic Analysis, Benefits and Impacts, Recycling and Sustainable Development, 16, pp. 51-66.
- 44. Koukoulis, N., **Anastassakis G.N.**, 2024. Mineral Processing Technologies and Equipment to Separate Fine/Ultrafine Mineral Values. A Review, Multi-authored monograph "Modern forms of development of resource-saving technologies for minerals, mining and processing", UNIVERSITAS Publishing, pp. 71-85, doi: 10.31713/m1306
- 45. A. Milkidou, **G.N. Anastassakis**, 2024. Incorporating circular economy business model canvas and social considerations: A framework for the electrical and electronic industry, Proceedings of Anastassakis International Symposium, SIPS 2024, 20-24 October 2024, Crete (accepted).
- 46. P. Angelopoulos, **G.N. Anastassakis**, M. Taxiarchou, 2024. Plant-based collector as substitute to xanthate in the flotation of metallic sulphides, Proceedings of Anastassakis International Symposium, SIPS 2024, 20-24 October 2024, Crete (accepted).
- 47. V. Dova, **G.N. Anastassakis**, 2024. Recycling Lithium-ion batteries (LiBs): Processes, environmental impact and economic feasibility, Proceedings of Anastassakis International Symposium, SIPS 2024, 20-24 October 2024, Crete (accepted).

## M34: Рад саопштен на међународном скупу штампан у изводу (Conferences with published abstracts)

- 1. Angelopoulos P.M., Oustadakis P., **Anastassakis G.**, Taxiarchou M., Pissas M. Pretreatment and magnetic separation of bauxite residue for enhanced recovery of valuable metals. VI Mineral Engineering Conference MEC. Wisla, Poland; 2023
- 2. Angelopoulos P.M., Oustadakis P., Koukoulis N., Taxiarchou M., **Anastassakis G.**, Paspaliaris I. Two-stage processing of bauxite residue towards the recovery of residual Al and the production of Fe- and REE-rich concentrates through magnetic separation. Physical Separation '22, May 9-11, 2022 Online
- 3. Angelopoulos P.M., Hruzova K., Yang X., Koukoulis N., Matsakas L., **Anastassakis G.**, Christakopoulos P., Rova U., Taxiarchou M. Partial substitution of conventional collectors with lignin bio-collector for the selective recovery of apatite and REE from low grade phyllosilicate ore. Flotation '21, Online 2021

### M63 Саопштење са скупа националног значаја штампано у целини (National Symposia)

- 1. Savvidis, S., Katsanos, E., Gavros, K., Haitidis, G., Vasiliadis, B., Goudoulas, K., **Anastassakis, G.**, Pretz, Th., Gaydarziev, St.: ANA.DY.MA. Recovery of valuable raw materials and energy though utilizing the unused mineral processing facilities in Western Macedonia. Symposium Archimedes, Florina (Western Macedonia, Greece), 29 November 2007.
- 2. Savvidis, S., Katsanos, E., Gavros, K., Haitidis, G., Vasiliadis, B., Goudoulas, K., **Anastassakis**, Pretz, Th., Gaydarziev, St.: Economic and Technical study on solid waste treatment facilities. Symposium Archimedes, Florina (Western Macedonia, Greece), 29 November 2007.
- 3. **Invited Lecture** in the Open University of Lokron Municipality (Fthiotis, Central Greece), Atalanti, 14 December 2012. <u>Title</u>: The alternative solid waste treatment concerns all of us.
- 4. **Invited Lecture** in the Technical Chamber of Greece Symposium "Colloquium on G.M.M. S.A. LARCO Ferronickel Co.", 19 May 2015, Athens, <u>Title</u>: The contribution of G.M.M. S.A. LARCO to the development of Technology.

## М70 – Магистарска и докторска теза

### М71 – Магистарска теза:

### **Degrees**

Georgios N. Anastassakis (1983): Mineral Processing Plant Design of Iron Ore from Serifos Island, Cyclades, National Technical University of Athens, (NTUA)

### М72 – Докторска дисертација

Georgios N. Anastassakis (1989): Contribution to the beneficiation of the unaltered phosphate rock of Epirous area (Greece) PhD in Mining Engineer and Metallurgy (Mineral Processing), National Technical Univ. of Athens (NTUA)

### **II ЦИТИРАНОСТ**

Scopus; Хиршов индекс h: 8, Број публикација: 21, Цитираност:556 https://www.scopus.com/authid/detail.uri?authorId=6507703993

ResearchGate: <a href="https://www.researchgate.net/profile/Georgios-Anastassakis">https://www.researchgate.net/profile/Georgios-Anastassakis</a>

Хиршов индекс h: 8, Број публикација: 39, Цитираност: 686

### ІІІ ИНЖЕЊЕРСКА ДЕЛАТНОСТ

### Учешће у научно-истраживачким пројектима и студијама

Funded Research Projects (selected) by EU, Greek Secretariat of Research and Technology (GSRT):

- 1. Closing the loop of the Spent Pot-line (SPL) in Al smelting process (SPL-CYCLE). EIT Raw Materials. PN 17141. Duration: 4/6/2018-31/12/2021
- 2. INCREASE of supply of BATTERy minerals by FLotAtIon of REE-rich apatite (BAT-PLUS) EIT Raw Materials, PN 19392, Duration: 15/6/2020-31/12/2020.
- 3. Supply of BATTERy Minerals Using Lignin Nanoparticles as FLotAtIon Collectors (Batterflai) EIT Raw Materials, PN 19089. Duration: 1/9/2019-31/12/2023.
- 4. Integrated Experimental procedure to recover Rare Earth Elements and Scandium from Bauxite residues -REEScue, MIS: 5174885. EU-Greece. Duration: 1/6/2022- 30/10/2023.
- 5. "Valid for Europe E-learning Education in Sustainability Waste Collection and Recycling of Plastics for the Environmental Protection" (LLP-LDV-TOI-07-BG-166-023).
- 6. "Development of Hydrometallurgical process to recover metals from PCBs Pilot application: Zero-waste Process", Project No T1ΕΔΚ-00219 EU-Greece
- 7. Scientific coordinator of the Greek-Chinese bilateral research project "Separation and recovery of Inox steel from Dishwashers", Project No T7ΔKI-00364,
- 8. "Development and characterization of composite materials based on expanded perlite. Topic studied: heavy metal removal from wastewater with chitosan adsorbent
- 9. Funded Industrial projects (selected): a) Removal of iron-impurities from quartz sand, b) Beneficiation of lignite-xylite deposits from GMMMSA LARCO Servia mine, Ash removal from lignite deposit of Megalopolis, Ptolemais and Florina deposits of Public Power Corporation of Greece, Barite and feldspar recover from Milos island volcanic tuff (S&B, currently IMERYS), Removal of impurities from pumice deposit of LAVA SA (LAVA-AGET HERCULES Group), Recovery of magnesite from tailings through flowsheet improvement and modifications (TERNA MAG), Gold recovery from pyrites (HELLAS GOLD SA), Research on the problem of fine particle generation in rotary kilns (LARCO Ferronickel GMM SA), Nickel recovery from rotary kiln slag (LARCO Ferronickel GMM SA), Thickener optimization for wet-dedusting of pre-reduced laterite (LARCO Ferronickel GMM SA)
- Non-funded Studies/Projects (selected): Lead removal from industrial and municipal waste waters 10. by flotation, Hydrodynamics of conventional flotation cells with external air blow, Physicochemical behavior of olivine and chromite during flotation with fatty acids, Influence of starch and sodium silicate on phosphate rock flotation with sodium oleate collector, Study on the separation of magnesite fines by magnetic carrier methods, Separation of fine mineral particles by selective magnetic coating, Quartz recovery from the tailings of nickeliferous laterite processing, Interactions of gum depressants with talc: Study of adsorption by spectroscopic and allied techniques, Solid-state electrochemical sensors for the metallurgical industry, Removal of phosphate species from solution by flotation, Physicochemical factors affecting flocculation of prereduced nickeliferous laterite suspension, Electro-osmotic dewatering of red mud slurry, Removal of phosphate species from solution onto calcite used as natural adsorbent, Selective magnetic separation by means of temperature and frequency, Chemical metathesis of chalcopyrite in acidic solutions, Magnesite/quartz fine particles separation through hydrophobic agglomeration, Pilot implementation of separate municipal solid waste collection system in National Technical University of Athens (NTUA), Management of dredged material in Greek ports and its disposal at the sea, Recovery of residual copper from low-content tailings derived from waste electrical cable treatment, Decontamination of diesel-polluted soil through flotation, Review of Coal preparation in the World - current status and global trends, Magnetic separation of fine gangue minerals from magnesite as hydrophobic co-agglomerates, Copper recovery from electric cable scrap by shaking tables, Nickel recovery from electric arc furnace slag by magnetic separation, Gas bubbling in copper electrowinning from cuprous chloride solutions, Selective Recovery of Graphite from Spent Potlining (SPL) by Froth Flotation, Municipal Solid Waste-to-Energy in EU-27 towards a Circular Economy, Combined use of organosolv lignin and xanthates on sphalerite flotation from mixed sulfides, Economic Analysis/ Benefits/ Impacts by establishing Deposit Refund System for PET

bottles in Greece, Recovery of Stainless Steel from End-of-Use Dishwashers, Fabrication of composite lightweight materials with upgraded physicochemical functionality and improved economic feasibility

**Research Activities:** He has been Senior Researcher or Supervisor in more than 40 research projects in areas such as:

- 1. Recovery of uranium from lignite
- 2. Gold recovery
- 3. Processing of many mineral deposits (sulfides, phosphates, feldspars, kyanite and sillimanite, antimonite, barite, magnesite, nickeliferous laterites, wollastonite, coal, chromite, quartz, volcanic tuff, pumice, etc.) by using physical and physicochemical methods (gravity methods, magnetic separation, electrostatics, flotation, selective agglomeration)
- 4. Recovery of by-products from tailings (e.g. nickel from slag, quartz from nickeliferous laterite processing, magnesite from rejected material before hand-sorting)
- 5. Iron removal from industrial minerals
- 6. Fundamental and applied research on flotation
- 7. Hydrodynamics of flotation cells
- 8. Flotation of sulfides and industrial minerals using environmental friendly collectors (organosolv lignin)
- 9. Fine and ultra-fine particles processing by applying magnetic coating or seeding and selective agglomeration methods
- 10. Flocculation and thickener operation both at industrial and lab scale
- 11. Electro-osmotic dewatering of red mud slurry
- 12. Heavy metal ion and phosphates removal from waste waters by flotation and by using natural sorbents (minerals, chitosan)
- 13. Factors affecting fine particle generation in rotary kilns
- 14. Recovery of by-products from mineral processing wastes
- 15. Management of SPL waste
- 16. Soil cleaning using flotation
- 17. Metals recovery from wastewaters
- 18. Separation of fine valuable materials from electric waste stream
- 19. Copper recovery from waste electric cables
- 20. Separation of metals from electric and electronic waste
- 21. Water purification from oil

During his service in NTUA he has been the supervisor of funded research projects related to the beneficiation of Greek lignites, up-grade of pumice, effluent purification from mines and metallurgical plants, factors affecting fine particle generation in rotary kilns, arsenic minerals removal from nickeliferous laterites etc. During his affiliation with GMM SA LARCO Ferronickel Co., he supervised 11 research projects and participated in the submission of proposals. He has also participated in the working group of the company, which submitted investment project for funding.

He has been member of research groups: a) in the frame of European Life-learning Project 2007-13 Leonardo da Vinci entitled "Valid for Europe E-learning Education in Sustainability – Waste Collection and Recycling of Plastics for the Environmental Protection" (LLP-LDV-TOI-07-BG-166-023), b) metal recovery from electronic waste through metallurgical treatment, c) scientific coordinator of the Greek-Chinese bilateral research project "Separation and recovery of Inox steel from Dishwashers" (T7 $\Delta$ KI-00364), d) flotation of sulfides using eco-collectors, e) "Increase of supply of battery minerals by flotation of REE-rich apatite", f) "Supply of battery minerals using lignin nanoparticles as flotation collectors", g) "heavy metal removal from wastewater with chitosan adsorbent", h) numerous industrial projects.

### **Research Interests:**

- 1. Mineral Processing of ores, coal, industrial minerals and rocks
- 2. Physical Chemistry of Surfaces (liquid-fluid, liquid/solid and air/solid interfaces) Phenomena at the interfaces, and Colloids
- 3. Physical Chemistry and Hydrodynamics of Flotation (reagents, green collectors, flotation cells)
- 4. Fine and ultra-fine particles processing, particle interactions, oil agglomeration
- 5. Flocculation, Electro-osmotic dewatering

- 6. Water effluent purification by flotation method and adsorption on natural sorbents
- 7. Solid waste processing and recycling
- 8. Soil cleaning by mineral processing methods

### IV ОСТАЛИ ПОКАЗАТЕЉИ УСПЕХА

## Учешће у уређивачким одборима часописа Participation in editorial boards of journal

- 1. Editor of the quarterly journal "Mineral Wealth" published by the Scientific Society of Mineral Wealth Technologists of Greece (1994-2012 ceased its publication).
- 2. Editor of the Proceedings of the XII Balkan Mineral Processing Congress, Delphi, June 10-14, 2007.
- 3. International Journal of Mineral Processing, published by Elsevier (2014-2016)
- 4. Minerals and Metallurgical Processing Journal, published by the Society for Mining, Metallurgy, and, Exploration, Inc. (SME).
- 5. Journal of Mining and Metallurgy, Section A: Mining, published by the University of Belgrade Technical Faculty of Bor, Serbia.
- 6. Recycling and Sustainable Development, published by the University of Belgrade Technical Faculty of Bor, Serbia.
- 7. Sustainable Extraction and Processing of Raw Materials Journal, published by The University of Mining and Geology "St. Ivan Rilski", Sofia, Bulgaria.
- 8. Journal of Ore Dressing, published by the Mineral Processing Society of Turkey.
- 9. Journal of Mining and Geology, published by the Nigerian Mining and Geosciences Society.
- 10. The Open Mineral Processing Journal, published by Bentham OPEN (2007-2010).
- 11. Buletin Resurse Minerale, published by the Romanian National Institute for Metals and Radioactive Resources ICPMRR.
- 12. Technical Annals, published by the Technical Chamber of Greece.

### **Affiliations**

- 1. International Advisory Committee (Country delegate) of International Mineral Processing Congress (IMPC)
- 2. Balkan Mineral Processing Congress (BMPC) Scientific Committee Country delegate)
- 3. Balkan Academy of Science on Mineral Technology (Full Member)
- 4. International Organizing Committee of The International Coal Preparation Congresses ICPC (Corresponding Member-Country delegate)
- 5. Society of Mining Professors (SOMP)
- 6. WFEO CEE Task Group on Sustainability and Mining
- 7. Society for Mining, Metallurgy and Exploration Inc. (SME) (2000-2010)
- 8. International Solid Waste Association (I.S.W.A.) (2000-2010)
- 9. Scientific Society of the Mineral Wealth Technologists of Greece
- 10. Technical Chamber of Greece
- 11. Association of Greek Mining Engineers and Metallurgists
- 12. Hellenic Ceramic Society of Greece

## Члан међународних организационих/научних одбора Конгреса Member Of Congress International Organizing/ Scientific Committees

- 1. TMS Fall 2002 Congress on Recycling and Waste Treatment in Mineral and Metal Processing: Technical and Economic Aspects, 16 20 June 2002, Lulea, Sweden
- 2. International Symposium on Bio-hydrometallurgy, September 2003, Athens, Greece
- 3. REWAS 2004, Global Symposium on Recycling, Waste Treatment and Clean Technology, 26 29 September 2004, Madrid, Spain
- 4. 1st International Conference on Engineering for Waste Treatment, Beneficial Use of Waste and Byproducts "WasteEng2005", 16-18 May 2005, Albi, France
- 5. Chairman of the XII Balkan Mineral Processing Congress, 10-14 June 2007, Delphi, Greece

- 6. 2<sup>nd</sup> International Conference on Engineering for Waste Valorization "WasteEng2008", 3-5 June 2008, Patras, Greece
- 7. REWAS 2008, Global Symposium on Recycling, Waste Treatment and Clean Technology, October 2008, Cancun, Mexico.
- 8. 3<sup>rd</sup> International Seminar ECOMINING Europe in 21<sup>st</sup> Century "Let's give Earth its balance back", September 4-5, 2009 Milos Island, Greece.
- 9. 13<sup>th</sup> International Geological Congress, Chania, Greece, 5-8 Sept. 2013.
- 10. 14<sup>th</sup> International Mineral Processing Symposium, 15-17 October 2014, Kusadasi.
- 11. 9<sup>th</sup> International Industrial Minerals Symposium, 14-15 May 2015, Izmir, Turkey.
- 12. 5<sup>th</sup> ICNES International Congress on Natural Engineering Science (ICNES), August 27-29, 2019, Istanbul, Turkey.
- 13. XIV International Mineral Processing and Recycling Conference IMPRC 2019, May 2019, Belgrade, Serbia.
- 14. XIV International Mineral Processing and Recycling Conference IMPRC 2021, May 12-14, 2021, Belgrade, Serbia.
- 15. XV International Mineral Processing and Recycling Conference IMPRC 2023, May 17-19, 2023, Belgrade, Serbia.
- 16. SIPS 2023, **Co-chair** of the 8th International Symposium on Mineral Processing, Nov. 27-Dec. 1, 2023, Playa Bonita, Panama.
- 17. VI International Scientific and Technical Conference "Innovative development of resource-saving technologies and sustainable use of natural resources", Member of the Scientific Committee, Petrosani, Romania, November 16, 2023.
- 18. 1st International Conference on Green Innovation and Circular Economy (GR-I-CE 2024), October 20-23, 2024, Athens, Greece.
- 19. XVI International Mineral Processing and Recycling Conference IMPRC 2025, May 28-30, 2025, Belgrade, Serbia.

## Члан научних одбора (Member Of Scientific Boards)

- 1. International Advisory Board of the XXII International Mineral Processing Congress, 28 September 3 October 2003, Cape Town, South Africa
- 2. Scientific Advisory Board of MiMeR (Minerals and Metals Recycling) Research Center at Lulea University of Technology, Sweden, 2002-4 (One of the 3 Members of the External-European Evaluators).
- 3. International Advisory Board of the XXIII International Mineral Processing Congress, 3-8 September 2006, Istanbul, Turkey.
- 4. International Advisory Board of the XXIV International Mineral Processing Congress, 5-9 September 2010, Brisbane, Australia.
- 5. National Representative of Greece in EU Coal and Steel Advisory Group (Steel Subgroup), 2008-2010.
- 6. Country Representative as Member of the Expert Group on Risk Management in the Extractive Sector (European Commission Directorate-General for Environment Waste Management & Secondary Materials) (2020-today)
- 7. Country Representative as Member of EU Technical Advisory Group on Risk Management in the Extractive Sector (2020-today)
- 8. Member of the ad-hoc Expert Scientific Committee, invited by the Greek Ministry of Energy and Environment to evaluate the submitted investment project and business plan, 2020.
- 9. Member of PhD Examining Committee of Lulea Univ. (Sweden), Cagliari Univ. (Italy)

## Руковођење и активност на факултету и универзитету (Administrative Positions)

During his service in National Technical University of Athens (NTUA) he has successfully undertaken the following administrative positions:

- 1. Deputy Dean of the School Mining Eng. and Metallurgy, NTUA (2016-18, 2018-2020)
- 2. Member of the Administration Board of the School Mining Eng. and Metallurgy, NTUA (2016-20 and 2020-2023)
- 3. Director of Mineral Processing Laboratory (2018-today)

- 4. Vice Chair of the NTUA Board of Undergraduate Studies (2015-2019)
- 5. Member of the Administration Board of NTUA-Professors (2019-2025) and vice-chair (2023-2025).
- 6. NTUA Quality Assurance Board (2015-2019, 2019-2023)
- 7. Head of the Division "Metallurgy and Materials Technology" NTUA (2010-14)
- 8. Deputy Head of the Division (2008-2010)
- 9. NTUA Donations and Property Board (2010-2014)
- 10. Chairman of the Mining and Metallurgical Engineering School-NTUA Committee for the receipt of commodities and services (2020-2021.
- 11. Greek Organization of Academic Degrees Accreditation (2008-2015)
- 12. Administration Board of NTUA (1995-96)
- 13. NTUA Board of Undergraduate Studies (1996-2000)
- 14. Economic administrator of the Section "Metallurgy and Materials Science" (1996-2003)
- 15. Greek Central Examination Board (1996-8, 2003-4) for students' admission into the Universities from foreign universities and Greek Technology Institutions
- 16. 1996-2014 member of the Board of Directors of the Scientific Society of the Mineral Wealth Technologists of Greece
- 17. 1998-2000, member of the Administrative Board of the Greek Association of Mining Engineers and Metallurgists

## Рецензентски рад у часописима (из области припреме минералних сировина (Reviewer of):

- 1. International Journal of Mineral Processing (Elsevier)
- 2. Minerals Engineering (Elsevier)
- 3. Journal of Colloid and Interface Science (Elsevier)
- 4. Colloids and Surface A (Elsevier)
- 5. Colloids and Surface B (Elsevier)
- 6. Environmental Science and Technology (The American Chemical Society)
- 7. Langmuir (The American Chemical Society)
- 8. Environmental Technology (Taylor & Francis)
- 9. Separation Science and Technology (Taylor & Francis)
- 10. Journal of Hazardous Materials (Elsevier)
- 11. Separation and Purification Technology (Elsevier)
- 12. Journal of the Taiwan Institute of Chemical Engineers (Elsevier)
- 13. Composites B (Elsevier)
- 14. Applied Clay Science (Elsevier)
- 15. Clay Minerals (Cambridge University Press)
- 16. Water and Environment Journal (Wiley)
- 17. Transactions of Nonferrous Metals Society of China (Elsevier)
- 18. International Journal of Mining Science and Technology (Elsevier)
- 19. Minerals and Metallurgical Processing Journal (Society for Mining, Metallurgy, and, Exploration, Inc. SME)
- 20. Mineral Processing and Extractive Metallurgy Review (Taylor & Francis)
- 21. Geochemical Journal (The Geochemical Society of Japan)
- 22. Journal of the Chinese Institute of Chemical Engineers
- 23. International Journal of Environment and Waste Management (Inderscience)
- 24. Industrial & Engineering Chemistry Research (The American Chemical Society)
- 25. The Open Mineral Processing Journal (Bentham OPEN)
- 26. Chemical Engineering Journal (Elsevier)
- 27. Adsorption Science and Technology Journal (Multi-Science Metapress)
- 28. Tenside, Surfactants, Detergents Journal (Hanser, Germany)
- 29. Materials Research Bulletin (Elsevier)
- 30. Powder Technology (Elsevier)
- 31. Physics and Chemistry of Minerals (Springer)
- 32. Clean Technology and Environmental Policy (Springer)
- 33. Environmental Science and Pollution Research (Springer)

- 34. Sustainable Extraction and Processing of Raw Materials Journal (University of Mining and Geology "St. Ivan Rilski", Sofia, Bulgaria)
- 35. Journal of Mining and Metallurgy, Section A: Mining (University of Belgrade Technical Faculty of Bor, Serbia).
- 36. Recycling and Sustainable Development (University of Belgrade Technical Faculty of Bor, Serbia).
- 37. Environmental Engineering and Management Journal ("Gheorghe Asachi" Technical Univ. of Iasi, Romania)
- 38. Philippine Journal of Science (Philippine Science and Technology Information Institute STII)
- 39. **Editor** (1994-2012) Mineral Wealth Journal, The Scientific Society of Mineral Wealth Technologists, Greece.
- 40. Numerous papers submitted in the following Congresses: IMPC 2003, International Symposium on Bio-hydrometallurgy 2003, REWAS 2004, WasteEng 2005, XII Balkan Mineral Processing Congress 2007, XIII Balkan Mineral Processing Congress 2009, IMPC 2010 and 2018, RawMat 2021 and 2013, etc.
- 41. Research Projects for the Greek Secretariat of Research and Technology (Greek Ministry of Development)
- 42. Research Projects for The Georgia National Science Foundation (GNSF) and of the corresponding Serbian Research Organization
- 43. Research projects submitted in other Greek Universities for funding

## Педагошки рад

### Уџбеници

## **Books, Chapters in Books and other Contributions:**

- 1. **G.N. Anastassakis**, 2018. Solid Waste Separation and Processing Principles and Equipment, Chapter in: Handbook of Environmental Engineering, Myer Kutz (Ed.), J. Wiley & Sons
- 2. **G.N. Anastassakis**, 2012. Fine/Ultrafine Mineral Particles Separation through Hydrophobic Agglomeration, Encyclopedia of Colloids and Surfaces, P. Somasundaran (ed.), Taylor & Francis, pp. 1-22, DOI: 10.1081/E-ESCS-120047358.
- 3. **G.N. Anastassakis**: a) Mineral processing methods, with special emphasis on tailings production and water management. Chapter 2.4 Phosphate processing, pp. 105-120 and b) Parameters, Chapter 7.3 Phosphate processing, p. 379, in: Tailings Management Facilities, T. Meggyes, K.E. Roehl, D. Dixon-Hardy (eds.), EPP Publications Ltd, 2008.
- 4. **G.N. Anastassakis**, Solid Waste Disposal and Recycling, Chapter 11, in: Handbook of Environmentally Conscious Materials and Chemical Processing, Myer Kutz (Ed.), J. Wiley & Sons, 2007, pp. 307-355.
- 5. N. Tsoni, M. Koutsoukos, **G.N. Anastassakis**, 2008. Separate Collection of Waste and its Recycling, pp. 41-76. European Lifelearning Project 2007-13 Leonardo da Vinci entitled "Valid for Europe E-learning Education in Sustainability Waste Collection and Recycling of Plastics for the Environmental Protection" (LLP-LDV-TOI-07-BG-166-023).
- 6. N. Tsoni, M. Koutsoukos, **G.N. Anastassakis**, 2009. a) Health and Safety, b) Sustainability, pp. 1-39. European Life-learning Project 2007-13 Leonardo da Vinci entitled "Valid for Europe Elearning Education in Sustainability Waste Collection and Recycling of Plastics for the Environmental Protection" (LLP-LDV-TOI-07-BG-166-023).
- 7. **G.N. Anastassakis**, "Solid Waste Recycling" (in Greek), NTUA Press, 2001, p. 156.
- 8. **G.N. Anastassakis**, "Physical Chemistry of Surfaces" (in Greek), NTUA Press, 1990, p. 142.
- 9. **G.N. Anastassakis**, teaching material on: a) Comminution, b) selected topics of Mineral Processing and c) Coal Beneficiation, 1989-90.

## Међународна сарадња

### Студијски боравак у иностранству

## Invited Researcher in Columbia University (New York) – Dept. Earth and Environmental Engineering (working with Prof. P. Somasundaran

## Награде и признања

1. Препорука чувеног Професора Даглас Ферстенауа, Калифорнија, САД, Мау 5, 2004

To Whom It May Concern:

Re: Recommendation on behalf of Dr. Georgios Anastassakis

This letter is to strongly recommend the promotion of Dr. Georgios Anastassakis to Associate Professor in the National Technical University of Athens. For a number of years, I was Chairman of the Department of Materials Science and Minerals Engineering in the University of California at Berkeley, and during that time I was directly in charge of a fairly large number of appointments, promotions and merit increases of faculty members. Some years earlier, I served three years on the University Committee that approves new appointments, promotions and merit increases of all faculty members in all Departments on the Berkeley Campus of the University of California. Based on my long experience, I am convinced that Dr. Anastassakis more than fulfills requirements for promotion to Associate Professor, and would even meet criteria for promotion to Professor. From my discussions with him and from reading some of his papers, it is clear that Dr. Anastassakis is thoroughly grounded in the principles of mineral processing. I am particularly impressed that he has an excellent understanding of the physical chemistry surfaces, which is vital for conducting modern research in flotation, which is the most important operation for making mineral separations. I note that he is able to utilize his understanding of mineral processing fundamentals to the solution of problems in mineral processing complex ores, recycling materials, and to helping solve such environmental problems as the renovation of process waters and the cleaning of soils. The international stature that Dr. Anastassakis has already achieved is shown by his having been invited to present technical papers at a large number of congresses and symposia around the world. Perhaps more indicative of his stature is the fact that he is regularly asked to review papers by leading mineral processing journals, by technical congress organizers, and by leading scientific journal concerned with the physical chemistry of interfaces, namely the Journal of Colloid and Interface Science. I am impressed with his membership and the active role that he has in a wide number of technical societies, both inside his native Greece and also in other countries. An example of this is his serving as a member of the International Advisory Board of the recent XXII International Mineral Processing Congress held this past October in Cape Town, South Africa. In helping organize international congresses and symposia, I know that he is an active participant. On numerous occasions, he has demonstrated to me that he is self-starter with a great deal of personal initiative. His being the editor of the Greek journal, Mineral Wealth, is an excellent example of his taking on an active professional role through his own initiative. Dr. Anastassakis has undertaken an impressive research program on topics that range from applied to very fundamental. I know that this extends from trying to solve practical problems of mineral processing complex ores in Greece, recycling materials, treating waste water and solid waste materials to conducting fundamental research on the surface chemistry of flotation phenomena. Since I have worked in many of these areas myself over the years, I can appreciate the contributions that dr. Anastassakis has made to these various topics. On three occasions I have heard Dr. Anastassakis make technical presentations (in English), and on the basis of his technical talks, I conclude that he should be a good teacher. This, of course, is an important aspect of being a university professor. In summary, I conclude that Dr. Georgios Anastassakis excels in all the areas required of a first-rank academic. He has a solid knowledge of the basic principles in his field and has demonstrated ability to apply this knowledge not only to practical but also to fundamental research. He is recognized in countries around the world, not only for his work in mineral processing but also for his contributions to the physical chemistry of surfaces phenomena in mineral-water systems. He clearly is highly motivated and a self-starter. He already brings credit to the National Technical University of Athens, and no doubt will continue to do so in the years to come. I strongly recommend his promotion to Associate Professor in NTUA.

Sincerely,

Douglas W. Fuerstenau Professor in the Graduate School

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DOUGLAS W. FUERSTENAU Professor in the Graduate School Department of Materials Science and Engineering 210 Hearst Memorial Mining Building Berkeley, California 94720-1760

Telephone: (510) 642-3826 FAX: (510) 643-5792 e-mail: dwfuerst@berkeley.edu

Professor Cyril O'Connor, Chairman International Mineral Processing Council University of Cape Town July 30, 2016

Re: Support of Professor Georgios N. Anastassakis for International Mineral Processing Council Member

### Dear Professor O'Connor:

I write to strongly recommend Professor Georgios Anastassakis of the National Technical University of Greece for Member of the International Mineral Processing Council. The Council would be well served to have as councilor a mineral processing engineer who has demonstrated excellence in all aspects of his profession as an academic whose widespread activities include teaching, extensive research on both fundamental and applied problems, publication of research results, participation in congresses and symposiums, member of organizing and scientific committees for symposiums, member of advisory boards, member of editorial boards, and significant reviewer of papers for numerous major journals worldwide. He has accomplished all of this as a faculty member in a university that has to operate under exceptionally severe financial constraints.

From my discussions with him and from reading some his papers, it is clear that Professor Anastassakis is thoroughly grounded in the principles of mineral processing and the physical chemistry of interfaces. He has undertaken an impressive research program that ranges from applied to very fundamental. His technical interests encompass such areas as fundamental and applied research on flotation, fine particle recovery, dewatering, recovery of useful materials from waste water, recyling, soil cleaning by flotation, and the processing such raw materials as phosphates, lignite coal, and ceramic raw materials. His teaching includes undergraduate mineral processing courses and advanced surface chemistry at the graduate level and, on top of this, several administrative roles within his university. Because of his breadth and experience, he surely would be able to contribute broadly to the activities of the Council.

Perhaps indicative of his worldwide stature as an engineer and scientist is the fact that he is regularly asked to review papers by the editors of numerous leading technical journals in diverse fields. This list not only includes such mineral processing journals as The International Journal of Mineral Processing, Minerals Engineering, and Minerals and

Metallurgical Processing (SME), but also the prestigious surface and colloid journals that include Elsevier's Colloids and Surfaces and their Journal of Colloid and Interface Science, and the American Chemical Society's Langmuir. Editors of important chemical engineering journals also seek his services for review of papers in Separation Science and Technology, Separation and Purification Technology, Industrial and Engineering Research, and Chemical Engineering Journal. His reputation as a leader in environmental matters is well recognized by his being a regular reviewer of papers for Environmental Science and Technology, Environmental Technology, Water and Environment Journal, and the International Journal of Environment and Waste Management. I conclude that Anastassakis is very reliable as a reviewer. Not everybody is reliable. As editor of IJMP, I personally recall sometimes sending papers for review to certain well-known people was like sending them to a black hole. In addition to reviewing manuscripts, he served on the editorial boards of a number of journals. His having been the editor of the Greek journal, Mineral Wealth, is an excellent example of his taking on an active role through his own initiative.

I am impressed with his membership and the active role that he has in a wide number of technical societies, both inside his native Greece and also in other countries. He has served not only on the International Advisory Committee of a couple of IMPCs but also on advisory boards and scientific committees of a range of congresses and symposia in Europe and America. Having had a number of discussions with him over the years, I am certain that he would be an active participant in conducting the business and programs of the IMPC Council.

In summary, Professor Georgios Anastassakis is an active and productive mineral processing engineer and scientist, not only in research and academic matters but also in dedicated service to his profession in technical symposium and editorial roles. He is highly motivated and a self-starter. There is no doubt that he would be a contributing IMPC Council Member, and with pleasure I support his nomination for that position.

Sincerely,

Varglas W. Tuerstonan

Douglas W. Fuerstenau **Emeritus Professor** 

Former Member IMPC Steering Committee Member, IMPC Advisory Committee

2. Препорука Професора Cyril T O'Connor, доктору Dr Florian Kongoli за одржвање међународног импозијума у част истакнутог рада и животних достигнућа проф. Георгиоса Анастасакиса, познатог професионалца у области припреме минералних сировина <a href="https://www.flogen.org/sips2024/Georgios\_Anastassakis.php">https://www.flogen.org/sips2024/Georgios\_Anastassakis.php</a>



## UNIVERSITY OF CAPE TOWN DEPARTMENT OF CHEMICAL ENGINEERING

## **Professor Cyril T O'Connor**

- Private Bag X3, Rondebosch 7701, South Africa Telephone: +27 (0)21 650-5515 Mobile: +27 (0)82 4990026
  - Email: cyril.oconnor@uct.ac.za

Dr Florian Kongoli SIPS (Sustainability through Science & Technology) Summit 13<sup>th</sup> February 2024

Dear Dr Kongoli

## Nomination of Professor George Anastasakis

I am writing to you to nominate Professor George Anastsakis to be recognized by an Award for his many outstanding contributions in the area of minerals processing. I have known Professor Anastasakis for many years and can attest to his outstanding contributions in this field not only in his home country but also globally. As can be seen from his CV his contributions are not only restricted to outstanding scholarly work but also to a very wide range of activities in which he has played a leadership role. These include membership of international editorial boards, invitations to present plenary lectures at top international conferences, being actively engaged in international initiatives in the critical field of sustainability in mining and minerals processing, and in chairing and close involvement in the organising committees of major international conferences. Over and above all these activities Professor Anastasakis enjoys an excellent international reputation as an academic teacher and scholar. His list of publications in journals and conferences is impressive and he is highly regarded in international circles for his research contributions. I have no hesitation in recommending Professor Anastasakis for the SIPS Award in recognition of his many globally recognized contributions.

Yours sincerely

**Emeritus Professor Cyril T O'Connor** 

Senior Research Scholar, University of Cape Town; Chair, International Mineral Processing Council (2006-2020); Founder member of the Academy of Science of South Africa and Fellow, respectively, of the University of Cape Town, the Royal Society of South Africa, the South African Academy of Engineering, the SA Inst. of Chemical Engineering, SA Inst. of Mining and Metallurgy (and Hon Fellow), and International Member of US National Academy of Engineering

National Technical University of Athens (N.T.U.A.), Greece 28.06.2024.

Candidate

Georgios N. Anastassakis