APPENDIX A: CV FORM				
Surname	Hassan			
Name	HANNACHE			
Nationality	Moroccan			
Date of birth	01-01-1956			
Town and country of birth	Casablanca, Morocco			
Former Full Professor at UH2C	·			
PhD Supervisor	34 years 45			
Member of Doctoral Dissertation	51			
	31			
Defense Jury	56			
Developed Partnerships Patents	28			
International publications	168			
H-index	29			
Citations	3355			
National and International	Over 200			
Communications		•4		
	Materials sciences	composites	Geopolymer	
Domain of interest	A 7 7 4	materials	1 0	
	Adsorbent	Fibers (ceramic and	glasses	
D' 1 C ' 4'6'	materials	glass)	11 ' 1' 11	
Biography Scientific		e, born in 1956 in Casa		
competencies	accomplished academic in Materials Engineering. He completed his advanced degrees, including a PhD from the University of Bordeaux 1, France, under the guidance of Prof. Roger Naslain. Starting his academic journey in 1984 at Hassan 2 University - Casablanca, he has risen to the position of Director of the Engineering and Materials Laboratory and Director of the Thematic Research Center "Materials & Energy." With a remarkable academic record, Prof. Hannache has 168 publications, an h-index of 29, 3355 citations, and a ResearchGate score of 2352, placing him among the top 90% of ResearchGate members. Over the years, he held key roles, including Head of the Center for Analysis and Research and coordinator of various programs. His research focuses on Materials Engineering, particularly composite ceramic matrix materials, water treatment materials, and the valorization of Moroccan natural resources. Prof. Hannache is an accomplished inventor with 28 patents and has received prestigious awards, including the 1998 Hassan II Grand Prize for Innovation. He served as a Visiting Professor at the University of Bordeaux I and has been an affiliated professor at the Mohammed VI Polytechnic			
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CHILINEX XVIIIVAL				
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	University since 2015, contributing significantly to academia and research			
Keywords		nposites materials, Geor	nolymer Adsorbent	
110, 110145		_		
materials, Fibers (ceramic and glass) and glasses. Contact				
Contact address (institution) Materials Science Energy and Nanoengineering Department,				
Commet dudi Coo (IIISHILUIOII)				
Phone	Mohamed VI Polytechnic University, Benguerir, Morocco + 212 522 704 675/ +212672444919			
E-mail:	Hassan.hannache@gmail.com/ Hassan.hannache@um6p.ma			
Candidate's Details				
Degrees held				
1984	State Doctorate Unive	reity Rordony I (Dordo	aux Franca)	
1704	State Doctorate, Utilive	rsity Bordeaux I (Borde	aux, Mailce)	

1982	Doctorate of 3rd cycle University Bordeaux I (Bordeaux, France)	
1980	DEA "physicochemistry of materials", University of Bordeaux I	
Professional Appointments		
1988-2022	Full Professor (Hassan 2 University – Casablanca)	
1984-1988	Teacher conferences (Hassan 2 University – Casablanca)	
1981-1983	Assistant Professor	
	University Institute of Technology (Bordeaux 1 University)	
1995 (1 month)	Invited Professor at the Bordeaux 1University Laboratory of	
	thermostructural composites- France	
1998 (1 months)	Invited Professor at the Bordeaux 1University Laboratory of	
	thermostructural composites– France	
1996-1998 (2 years)	Affiliate Professor at the Automotive Research and Engineering	
	Center (CREA/OFPPT – Casablanca)	
2012-2014 (3 years)	Affiliate Professor at the Higher School of Textile and Clothing	
	Industry (R&D REMTEX/ESITH – Casablanca)	
Since 2015 (5 years)	Affiliate Professor at the he Mohammed VI Polytechnic	
	University. (MSN/UM6P – Benguérir)	
Since august 2023	Expert R&D MSN Um6p	
Since December 2023	Head of Extraction and Purification technologies Team at	
	MSN/ UM6P	
Awards and honors		
1998	Hassan II Grand Prize for Innovation	
1998	Bronze Medal "Coignard" *LCTS (UBx I, CNRS, SNECMA-	
	SPS, CEA*	
2000	1st prize of innovation ONEP.	

1. Professional Responsibilities in Scientific Research:

1980-1984: Doctoral Research in Materials Composites

- Integrated into the "matériaux composites à hautes performances" team at the University of Bordeaux I.
- Developed research projects in collaboration with the European Society for Propulsion (SEP/SNECMA-SPS/SAFRAN).
- Managed a significant operating budget under the guidance of Prof. Roger Naslain.
- Responsible for collaboration with scientific equipment suppliers and aerospace industrial workshops.

1982-1984: Scientific Expert at SEP/SNECMA-SPS/SAFRAN

• Contribution to the development of the Industrial Vapor Phase Chemical Infiltration Reactor for Boron Nitride.

1982-1984: Hygiene and Safety Manager

• Managed hygiene and safety for the Materials Composites Team at CNRS / University of Bordeaux I.

Since 1985: Involvement in Scientific Event Organization

• Active participation in several scientific event organizing committees.

1991-2004: Head of Thermostructural Materials Laboratory

- Led research on the physico-chemistry of solid materials.
- Confidentiality commitments respected for eight years.
- Defined three research axes: industrial collaboration, scientific interest, and Moroccan R&D.

1999-2001: Ph.D. Program Head (UFR-VARENAP)

2004-2012: Founder of Subatomic Research Lab and Team Leader

• Coordinated with physics departments for a multidisciplinary approach.

2013-2022: Director of the Engineering and Materials Laboratory (LIMAT)

- LIMAT is a multidisciplinary laboratory comprising five research teams.
- Materials thermostructural and Polymers (EMTP)
- Engineering and Mechanics (EIM)
- Materials and Energetics (EME)
- Materials and Thin Films (MCM)
- Materials, Optics, and Image Processing (EMOTI)

1995-2022: Expert for Scientific Project Evaluations

2002-2022: Participation in Scientific, Cultural, and Socio-economic Event Committees

2003-2022: Founder and Head of the SERENA Research Group

Since 1984: Member of the National Scientific Committee of REMCES

1994-2002: Involvement in Maghreb Days of Materials Science (JMSM)

1994: Participation in Science and Technology Days (Faculty of Sciences Ben M'sik)

1995-2022: Expert for CNRST Project Evaluations (PARS and PROTARS)

2001-2023: Member of the REMAT Skills Pole Oversight Committee

2001-2003: Coordinator of Business Incubation Project

Since 2003: Organizer and Speaker at University-Industry Meeting

2. <u>RESPONSIBILITIES IN COOPERATION PROJECTS:</u>

Prof. Hassan Hannache's responsibilities in various cooperation projects:

1- Project Title: Elaboration and valorization of Composite and Non-composite Materials in the Water and Energy Sector

- Funding Source: University Hassan II Mohammedia Casablanca (Research Center M&E)
- Duration: January 2013 December 2015
- Funding Raised: 3,250,000.00 DHS

2- Project Title: Elaboration and valorization of natural substances and structured porous materials for organic pollutant treatment (MATOXPOL)

- Funding Source: Franco-Maghreb Cooperation managed by EGIDE.
- Duration: April 2012 March 2015
- Funding Raised: 1,200,000.00 DHS

3- Project Title: Eco-panels: Valorization of Acacia Mollissima Bark - Tannin-based Sticky Mixtures and Composite Panels

- Funding Source: Integrated Actions Program, managed by the Volubilis Committee
- Duration: April 2012 March 2015
- Funding Raised: 720,000.00 DHS

4- Project Title: Solvent Extraction of Organic Matter from Oil Shale: Study and Valorization of Produced Oils

- Funding Source: Academy of Sciences and Techniques Morocco
- Duration: December 2011 December 2014
- Funding Raised: 2,954,000.00 DHS

5- Project Title: Elaboration and Characterization of New Geopolymers

- Funding Source: Integrated Actions Program, managed by the Volubilis Committee
- Duration: 2011 2013
- Funding Raised: 400,000 DHS

6- Project Title: National Network on the Physicochemistry of Materials (REMAT)

- Funding Source: Directorate of Sciences (MENESFCRS)
- Duration: Since its creation December 2011
- Funding Raised: 3,000,000.00 DHS

7- Project Title: Mastech, Flexible Modular Master Programme in Technology

- Funding Source: European Commission, Tempus
- Duration: October 2010 September 2013

- Funding Raised: 8,838,072.25 DHS
- 8- Project Title: Strengthening Innovation Strategy and Improving Technology Transfer in the Water Technology Sector of Morocco (NORIA)
 - Funding Source: European Commission, Tempus
 - Duration: October 2010 September 2013
 - Funding Raised: 5,371,167.00 DHS
- 9- Project Title: Preparation of Precursor Resins for Geopolymer Matrix Composite Materials
 - Funding Source: SNECMA-SPS (France)
 - Duration: January 2009 January 2010
 - Funding Raised: 160,000.00 DHS
- 10- Project Title: Behavior of Metals at the Interface Phosphate/Water, Shale/Water, Clay/Water
 - Funding Source: University Hassan II-Mohammedia, ONHYM, INRH, and CNESTEN
 - Duration: Since 2010
 - Funding Raised: Mutualization of resources and skills
- 11- Project Title: Valorization of Natural Resources in the Environmental Domain
 - Funding Source: Franco-Maghreb Cooperation managed by EGIDE
 - Duration: 2010 2012
 - Funding Raised: 300,000.00 DHS
- 12- Project Title : Solvent Extraction of Organic Matter from Oil Shale: Production of Activated Carbon Fibers with High Performance
 - Funding Source: Integrated Actions Program
 - Duration: October 2000 September 2004
 - Funding Raised: 200,000.00 DHS
- 13- Project Title : Tech Transfer-Edition 2021: Production of Elemental Phosphorus & Derivatives Phos4
 - Funding Raised: 9,940,000.00 DHS
- 14- Project Title: ENSUS-MSN-UM6P: Production of Carbon Materials based on Moroccan Oil Shale for Structural Batteries 2021-2022
 - Funding Raised: 500,000.00 DHS
- 15- Project Title: Tech Transfer-Edition 2021: Multifunctional Composites based on Phosphate Glass Fibers 'PhosTex'
- 16- Project Title: OCP-UM6P: Development of Geopolymer Using Phosphate By-products: Applications in Construction and other Industrial Uses including Corrosion Protection
- 17- Project Title: UM6P-OCP 2022: Development of New High Value-added Products based on Phosphogypsum
- 18- Project Title: Tech Transfer-Edition 2021: Production of Multifunctional Technical Textiles
- 19- Project Title: ENSUS-MSN-UM6P: Moroccan Oil Shale New Raw Material to Produce Carbon and Graphite-"MC4Energy"
 - Funding Raised: 500,000.00 DHS
- 20- Project Title: Green InnoBOST 2.0: MAGPOWER VRL (Valorization of Local Resources)
 - Funding Raised: 1,495,583.95 DHS

3. Administrative Responsibilities:

1982-1984: Hygiene and Safety Head

• Led hygiene and safety for the Materials Composites Team at CNRS/University of Bordeaux I.

1985–1991: Department College Member

• Served multiple mandates in the Chemistry Department.

1985-2022: Participation in Department Committees

• Engaged in various ad hoc commissions.

1985-2022: Crisis Team Member

• Contributed to crisis management at FSBM.

1985-2022: Event Organization Committees

Participated in organizing scientific, cultural, and socio-economic events.

1984–2002: Institutional Council Member (Ex Officio)

1986-1988: Department Head of Chemistry

- Formulated the department's first internal regulations.
- Managed procurement of scientific equipment and chemicals.
- Implemented second-cycle teaching.
- Established the department's initial research laboratories.

1994–1999: Coordinator of Examination Juries

 Managed examination follow-up, decision harmonization, statistics, and dispute resolution.

2002–2005: Scientific Commission Member (Elected)

2004-2008: Coordinator of the Institution's Multi-Year Project

Coordinated a successful project for scientific research funding.

2006–2009: Scientific Commission Member (Re-elected)

Since 1989: Responsible for Various Research Projects in Socio-economic Context

Since 2002: Mission Holder (UH2MC)

- Coordinated the teacher promotion monitoring commission.
- Served as an expert for scientific commissions of university institutions.

2002-2022: Member and/or Chairman of Various Ad Hoc Committees

2003-2022: Director of the Center for Analysis and Research (Ben M'sik Campus)

- Established as part of the university's research development project.
- Regulated by internal statutes with objectives of promoting fundamental and applied research, knowledge transmission, and service provision.
- Opened platforms to industries for analysis services.

2003-2022: Member of the Faculty of Letters and Human Sciences Mohammedia's Study Commission

2004: Member of the Faculty of Letters and Human Sciences Ben M'sik's Study Commission

2008: Member of the Faculty of Sciences and Techniques Mohammedia's Study Commission

2012: Member of the Ecole Normale Supérieure de l'Enseignement Technique Mohammedia's Study Commission

2013: Coordinator of the Research Center "Materials and Energy"

• Eight research laboratories under the University II Mohammedia Casablanca.

2013: Representative for the Creation of the Energy Efficiency Cluster in Construction

2013: Representative for the Creation of the Technical Textile Usage Cluster

• Appointed by the President to lead the Competencies and Human Resources Commission.

4. PROFESSIONAL ASSOCIATIONS

Since 1984: Member of REMCES - Moroccan Meetings on Solid State Chemistry

 Key activities include organizing international conferences and publishing proceedings.

Since 1995: Founding Member of the Association of Thermostructural Composites Graduates

Since 2000: Founding Member of the Moroccan Association of Crystallography (AMC

Since 2010: Founding Member of the R&D Commission, National Federation of Agri-food (FENAGRI)