

**Search for a Spanish Partner for a
Bilateral R&D Project (this document will be shared with potential Spanish
companies)**

Organization	
Date of Request:	02/01/2019
Company name:	Equipe EMDD (Energie Materiaux Developpement Durable EMDD- EST Salé Université Med V Rabat
Contact person and title/ designation:	Khabbazi Abdelhamid coordonnateur equipe EMDD
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SECTION 1: Your Company Profile	
<i>(Please give brief / to the point explanations. For more explanation on any point below, you may add a short paragraph as an annexure, with this document.)</i>	
Business Sector	Water, energy and environment
Company mission or core functions	Desalination of seawater by solar energy Ecological treatment for wastewater Energetic efficiency Ecological materials
Date of establishment	we are a public structure (EMDD team) of Med V University (this structure was formed two years ago)
Ownership (if public and traded, add stock exchange and ticker symbol)	
Total number of employees	16
Number of employees in R&D	8 teaching researchers 9 PhD students
Key products sold or services provided	-Modular desalination system (HD system) -Wastewater treatment by algal channel - ecological insulation materials
Company core technical competences	field of competence: research and development on water, energy efficiency and

	environment
Key R&D programs and activities	field of competence research and development in the field of water, energy efficiency and environment.
Examples of accomplishments	<p>- develop modular seawater desalination systems using solar energy (25 litres/j)</p> <p>- wastewater treatment using ecological process</p> <p>- ecological insulation materials</p> <p>Scientific articles (EMDD team) for exemple: <u>Modular desalination system (HD system)</u></p> <p>[1] LADOUY, Sara et KHABBAZI, Abdelhamid. Experimental investigation of different air heating methods near to the evaporation surface in closed triangular shape unit powered by solar energy, one stage-Indoor experiment. Applied Thermal Engineering, 2017, vol. 127, p. 203-211.</p> <p>[2] LADOUY, Sara et KHABBAZI, Abdelhamid « Experimental study of the effect of heating the humid air in different positions in a new desalination system, by HDH process, using solar energy » à 3rd International Renewable and Sustainable Energy Conference (IRSEC) à Marrakech & Ouarzazate, Morocco, le 10-13 Décembre 2015.</p> <p>[3] LADOUY, Sara et KHABBAZI, Abdelhamid “Etude expérimentale et théorique du un nouveau procédé de dessalement d’eau par Humidification- Déshumidification de l’air en utilisant les énergies renouvelables” 17 ièmes Journées Internationales de Thermique: Energie – Environnement à Marseille-France, le 28, 29 et 30 Octobre 2015.</p> <p>[4] Sara Ladouy, Abdelhamid Khabbazi, Experimental Study of the Water Depth Effect and the Impact of Condensers Connection in a New Desalination System by HDH Process, Using Solar Energy, Energy Procedia, Volume 74, August 2015, Pages 952-959,</p> <p>[5] Sara Ladouy, Abdelhamid Khabbazi, Experimental Study of the Water Depth Effect and the Impact of Condensers Connection in a New Desalination System by HDH Process, Using Solar Energy, TMREES15 International Conference, Technologies and Materials for Renewable Energy, Environment and Sustainability, à Beirut-Lebanon , le 17,18 ,19,20, April 2015.</p> <p>[6] Sara Ladouy, Abdelhamid Khabbazi, communication « Desalination of seawater by HDH process, a single stage, using solar energy ».1ère édition du colloque franco-marocain sur les Energies Nouvelles et Renouvelables (COFMER’01) à Rabat-Maroc à l’Ecole Mohammadia d’Ingénieurs, le28, 29 et 30 octobre 2014</p> <p>[7] S. Mounir1, S.Ladouy, K.EL Harrouni, A.Khabbazi, Y.Maaloufa “ SOLAR PHOTOVOLTAIC FOR SUSTAINABLE USE IN TRITURATION OIL OLIVE UNIT AND ENERGY EFFICIENCY IN COLD AND HYDRIC STORAGE.”in The 33rd EU PVSEC 2017 in Amsterdam 25-30 septembre</p> <p><u>wastewater treatment using ecological processe</u></p> <p>1) Bamaarouf.M., Jellal.J.E., Bouzidi.A. 2010.</p>

	<p><i>Etude de la cinétique d'élimination de la matière organique dans un système intégré réacteur anaérobie-chenal algal à haut rendement. Revue des sciences de l'eau. Vol 23-2.</i></p> <ol style="list-style-type: none"> 2) Bamaarouf.M., Jellal.J.E. 2008. <i>Economie d'eau dans le secteur irrigué au Maroc potentiel revalorisable. Revue marocaine de génie civil.numéro 121.</i> 3) Bamaarouf.M., Jellal.J.E., Bouzidi.A. 2008. <i>Les ressources en eau au Maroc une révision à la baisse. 4^{ème} conférence internationale sur les ressources en eau dans le bassin méditerranéen.22-24 Mars à Alger.</i> 4) Bamaarouf.M., Jellal.J.E., Bouzidi.A. 2008. <i>Economie d'eau dans le secteur irrigué au Maroc. 4^{ème} conférence internationale sur les ressources en eau dans le bassin méditerranéen.22-24 Mars à Alger.</i> 5) Bamaarouf.M., Jellal.J.E., Bouzidi.A. 2007. <i>Etude de la cinétique d'élimination de la matière organique dans u n système intégré. Congrès international Eau et Déchets.22-23 Novembre Faculté des sciences Oujda.</i> 6) Bamaarouf.M., Jellal.J.E., Bouzidi.A. 2007. <i>Etude de la cinétique d'élimination de la matière organique dans u n système intégré. Congrès international Eau et Déchets.22-23 Novembre Faculté des sciences Oujda</i> 7) Bamaarouf.M., Jellal.J.E., Bouzidi.A. 2008. <i>Etude de la cinétique d'élimination de la matière organique dans u n système intégré. Deuxième congrès national sur l'amélioration agricole. Mars. Faculté des sciences et techniques Settat.</i> 8) Bamaarouf.M., Jellal.J.E., Bouzidi.A. 2008. <i>Etat actuel des ressources en eau au Maroc. Deuxième congrès national sur l'amélioration agricole. Mars. Faculté des sciences et techniques Settat.</i> 9) « <i>Modélisation et optimisation de fonctionnement du réacteur anaérobie dans le système intégré pour le traitement des eaux usées domestiques</i> » Ali tarfas ; Abdelilah Abid ; Jawad el Ghabi ; Hicham Ihmain ; Meriem Bamaarouf ; Jamal eddine Jellal. European journal of scientific research. Vol 127 No3 décembre , 2014, pp. 311 – 322 10) « <i>Anaerobic Reactor Element The Key To Integrated System</i>” Ali Tarfas, Hichame Ihmaine, Jaouad Elghabi, Abdelilah Abid , Meriem Bamaarouf and Jamal Eddine Jellal. International journal of pure and
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	<p>applied bioscience. Vol 3. 2015 <u>ecological insulation materials</u></p> <p>[1] S. Mounir, A. Khabbazi, Y. Maaloufa, A. Khaldoun, Y. El Hamdouni, Experimental Approach of Measuring Thermal Properties for Ecological Materials Based on Additives Cork or Wool and Illite, <i>J. Therm. Sci. Eng. Appl.</i> 8 (2016) 021012–021012. doi:10.1115/1.4032180.</p> <p>[2] Y. Maaloufa, S. Mounir, A. Khabbazi, J. Kettar, A. Khaldoun, Thermal Characterization of Materials based on Clay and Granular: Cork or Expanded Perlite, <i>Energy Procedia.</i> 74 (2015) 1150–1161. doi:10.1016/j.egypro.2015.07.757.</p> <p>[3] S. Mounir, A. Khabbazi, A. Khaldoun, Y. Maaloufa, Y. El Hamdouni, Thermal inertia and thermal properties of the composite material clay–wool, <i>Sustain. Cities Soc.</i> 19 (2015) 191–199. doi:10.1016/j.scs.2015.07.018.</p> <p>[4] S. Mounir, K. abdelhamid, Y. Maaloufa, Thermal Inertia for Composite Materials White Cementcork, Cement Mortar-cork, and Plaster-cork, <i>Energy Procedia.</i> 74 (2015) 991–999. doi:10.1016/j.egypro.2015.07.830.</p> <p>[5] Abou-bakr Cherki, Abdelhamid Khabbazi, Soumia Mounir, Youssef Maaloufa, Thermal properties of a new ecological building material/Granular cork embedded in white cement, <i>MATEC Web Conf.</i> 11 (2014) 01017. doi:10.1051/mateconf/20141101017.</p> <p>[6] S. Mounir, Y. Maaloufa, A. bakr Cherki, A. Khabbazi, Thermal properties of the composite material clay/granular cork, <i>Constr. Build. Mater.</i> 70 (2014) 183–190. doi:10.1016/j.conbuildmat.2014.07.108.</p> <p>[7] S. Mounir,, A. Khabbazi , A. Khaldoun , Y. Maaloufa, Thermal Transmittance of Exterior Walls Using the Composite Illite Clay – Cork, . <i>Journal of Emerging Trends in Engineering and Applied Sciences (JETEAS)</i> 6(7): 157- 163. (ISSN: 2141-7016).</p> <p>[8] S. Mounir, A. Khabbazi, Y. Maaloufa, A. Khaldoun, Y. Hamdouni, Thermal Inertia and Thermal Properties of the Composite Material Clay-plastic, <i>Res. J. Appl. Sci. Eng. Technol.</i> 12 (2016) 507– 515. doi:10.19026/rjaset.12.2677.</p> <p>[9] Y.ElHamdouni, A. Khabbazi, Chaimaa Benayad, S. Mounir, ,A. Daddi, Y, Contribution to the Thermal Behavior of a New Material: Clay/Fiber Alfa, <i>Research Journal of Applied Sciences, Engineering and Technology</i> 10(10): 1227-1235, 2015 DOI: 10.19026/rjaset.10.1891.</p> <p>[10] Youssef Maaloufa, Soumia Mounir, Abdelhamid Khabbazi and Jalal Kettar, Effect of Calcination on the Thermal Properties of Bricks Done From Clay-Expanded Perlite on Insulating Walls ,<i>Research Journal of Applied Sciences, Engineering and Technology</i> 12 (3): 304-311, 2016 DOI: 10.19026/rjaset.12.2337 ISSN: 2040-7459; e-ISSN : 2040-7467.</p>
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Company strategic orientation	use clean energy for seawater desalination and wastewater treatment to help conserve water resources
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SECTION 2: Partner of Interest

(Please provide a brief summary of the prospective partner company or organization. This summary may address some or all of the points below)

Profile of ideal technology partner	Develop, in collaboration with Spanish teams, modular seawater desalination and wastewater treatment systems using solar energy (small and medium capacity) Treatment of wastewater by ecological methods
Core technological competencies and expertise	desalination of seawater using solar energy Treatment of wastewater by ecological methods experience in wastewater treatment
Other essential qualifications (e.g.: ownership, track records etc.)	
If you have a list of companies with whom you are in contact or interested in contacting, please provide contact details	In stage of research of the contacts of public or private organization for collaboration in the field cited above
If you are interested in collaboration: please specify details and other important information you want to share with a potential company	
Interested areas of collaboration	Eau, efficacité énergétique, environnement
Specific R&D contribution you are seeking/offering	

Signature

Name: A.Khabbazi

Coordonnateur Equipe EMDD

Date: 02/01/2019