

**Competences (Research) Center:  
Interfaces - Tribocorrosion and Electrochemical Systems (CC-ITES).**

<b>Offer name:</b>	<b>Assessment of the free energy of the surfaces of the materials and the solid protection layers (hydrophilic, hydrophobic)</b>
<b>Description</b>	<p>Consultancy, expertise, technical assistance in measuring the contact angle (static and / or dynamic), assessment of the free energy of the materials surfaces and solid protection layers (in accordance with 9 different theories), superficial tension, adhesion force and area wetting for solids on contact with water or other 170 liquids in the database.</p> <p>The performance of an in situ biomaterial is generally assessed by "biocompatibility", which refers to the measured success of the interaction between the implant biomaterial and the biological cells for a specific biomedical site. If the biomaterial delays the interaction or affects the natural biological process for which it is intended to function, the biomaterial would be considered incompatible. Measurement of the surface watering capacity of a biomaterial is measured by measuring the contact angle.</p> <p>Many works have been done to measure the contact angle on different implant biomaterials. It is assumed that increased hydrophilicity (as evidenced by a low contact angle) will result in improved biocompatibility.</p> <p>In Fig. 2 and 3 shows the specific apparatus for measuring the contact angle while in Fig. 3 shows a dynamic measurement of the angle of contact on the surface of an alloy.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Fig. 1</p> </div> <div style="text-align: center;">  <p>Fig. 2</p> </div> <div style="text-align: center;">  <p>Fig. 3</p> </div> </div>
<b>Responsible</b>	<p><b>Prof. Univ. Dr. (Ph.D.) Chem. Lidia BENEĂ.</b>  <b>Competences (Research) Center: Interfaces - Tribocorrosion and Electrochemical Systems (CC-ITES).</b>  <b>Dunărea de Jos University of Galati.</b></p>
<b>Contact</b>	<p><b>111 Domnească Street, Building AN, Room AN 012, 800201 Galati, România</b>  <b>E-mail: Lidia.Benea@ugal.ro</b></p>