

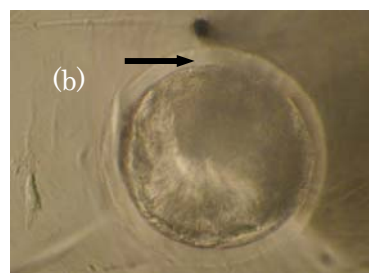
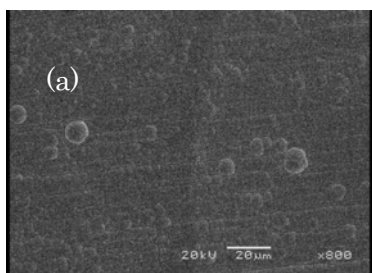
# Corrosion Engineering, Surface Finishing and Evaluation of Bovine Embryos



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<b>Keywords</b>	Electrochemistry, Corrosion, Surface Finishing, <i>in vitro</i> Fertilized Bovine Embryos		
<b>Technical Support Skills</b>	<ul style="list-style-type: none"> <li>• Corrosion Engineering and Surface Finishing</li> <li>• Electrochemical Measurements</li> <li>• Evaluation of Bovine Embryos by Electrochemical Methods</li> </ul>		

## Research Contents Electrochemistry and Corrosion Laboratory

1. Corrosion Reaction Mechanisms in Various Environments and Corrosion Protection
2. Development of New Functional Metallic Thin Films by Electrodeposition
3. Evaluation of *in vitro* Fertilized Bovine Embryos at Earlier Developmental Stages by Membrane Potential Measurement Using Microelectrode and Evaluation of *in vitro* Fertilized Bovine Blastocysts by Measurement of Oxygen Consumption



- (a) SEM image of surface for novel metallic glass alloy electrodeposited by pulse plating.
- (b) Photomicrograph of bovine embryo on day 8 after *in vitro* fertilization.  
(the arrow indicates SECM micro probe)

Our laboratory is equipped with various electrochemical measurement systems in order to study the electrochemistry in corrosion and to develop the novel surface finishing methods.

### Available Facilities and Equipment

X-ray photoelectron spectroscopy, ESCA3200 (Shimadzu)	Electrochemical measurement system
Scanning electrochemical microscopy, HV-403 (Hokuto Denko)	<ul style="list-style-type: none"> <li>• Potentiostat/galvanostat HZ-5000&amp;HSV-110(Hokuto Denko) Model2000(Toho Giken)</li> </ul>
	<ul style="list-style-type: none"> <li>• Electrochemical Quartz Crystal Microbalance HQ-101D(Hokuto Denko)</li> </ul>
	<ul style="list-style-type: none"> <li>• Frequency response analyzer, S-2720C (NF)</li> </ul>