

Abstract Submitted  
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**Capacitance of highly ordered nanocapacitors arrays:  
Model and microscopy**<sup>1</sup> ANDREA CORTES, CARLOS CELEDON,  
PABLO ULLOA, PATRICIO HABERLE, Department of Physics, Uni-  
versidad Tecnica Federico Santa Maria — It is described briefly the pro-  
cess used to build an ordered porous array in an anodic aluminum oxide  
(AAO) template, filled with multiwall carbon nanotubes (MWCNTs).  
The MWCNTs were grown directly inside the template through chemi-  
cal vapor deposition (CVD). The role of the CNTs is to provide narrow  
metal electrodes wich contact with a dielectric surface barrier, hence,  
forming a capacitor. This procedure allows the construction of an array  
of  $10^{10}$  parallel nano-spherical capacitors/cm<sup>2</sup>. A central part of this  
contribution is the use of physical parameters obtained from processing  
high-resolution transmission electron microscopy (HRTEM) images, to  
predict the specific capacitance of the AAO arrays. Electrical parame-  
ters were obtained by solving Laplace's equation through finite element  
methods

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Patricio Häberle  
Department of Physics, Universidad Tecnica Federico Santa Maria

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