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## Influence of curvature on the crystal surface potential

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Nowadays a strong effort is put into research of nanostructures formation (shaping/creation) both on the surface and inside solid state specimens. Such an intention is dictated by a constant drive for interfaces miniaturization in submicron electronics and allied research areas. Hence, so called mesomaterials, e.g. cellular materials or capillary structures, are of a great interest. For instance, those polycapillary structures are widely used for manipulation of neutral particles (photons of X-ray and  $\gamma$  frequencies, neutrons, atoms). One of the most recent examples is related to the use of a microcapillary plate as an X-ray optics element. The theory of X-ray and neutron beams propagation through such systems is well developed and experimentally proved.

Talking about particles interaction with capillary structures, we still lack a generalized description of charged particles interaction with a curved surface. Basing on a yearly project results, we analytically describe such interaction of a charged particle with curved surface of a crystal in a very simple approximation.

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