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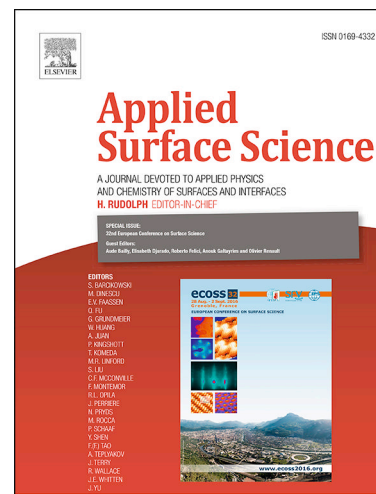
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Adsorption behavior of Zn Porphyrins on a (101) face of anatase TiO₂.

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ABSTRACT

The adsorption behavior of porphyrin molecules on anatase TiO₂(101) has been investigated with scanning tunneling microscopy (STM) in ultra-high vacuum (UHV) at room temperature. At low coverage, the ZnTPP molecules have a tendency to adsorb on the one type of step edges forming molecular chains. Due to relatively high mobility of molecules stable assemblies appear only close to a monolayer coverage. Zn porphyrins in self-assembled molecular domains form a commensurate structure. In-plane rotation of the molecules leads to formation of two domains of different chirality.

INTRODUCTION

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