SYNTHESIS AND CHARACTERIZATION OF NANOCOMPOSITES COATING BASED ON INORGANIC OCTAHEDRAL CLUSTER UNITS FABRICATED BY ELECTROPHORETIC DEPOSITION PROCESS.

Fabien Grasset, UMI 3629 CNRS-Saint Gobain-NIMS, NIMS, Tsukuba, Japan ; Research Center for Functional Materials, NIMS, Tsukuba, Japan
fabien.grasset@univ-rennes1.fr, grasset.fabien@nims.go.jp
Ngan.T.K. Nguyen, UMI 3629 CNRS-Saint Gobain-NIMS, NIMS, Tsukuba, Japan ; Research Center for Functional Materials, NIMS, Tsukuba, Japan
Adèle Renaud, UMR 6226 CNRS-University of Rennes 1, ISCR, Rennes, France
Benjamin Dierre, UMI 3629 CNRS-Saint Gobain-NIMS, NIMS, Tsukuba, Japan ; NIMS-Saint-Gobain COE for Advanced Materials, NIMS, Tsukuba, Japan
Maria Amelia-Cortes, UMR 6226 CNRS-University of Rennes 1, ISCR, Rennes, France
Noée Dumait, UMR 6226 CNRS-University of Rennes 1, ISCR, Rennes, France
Stéphane Cordier, UMR 6226 CNRS-University of Rennes 1, ISCR, Rennes, France
Wanghui Chen, UMI 3629 CNRS-Saint Gobain-NIMS, NIMS, Tsukuba, Japan ; Research Center for Functional Materials, NIMS, Tsukuba, Japan
Naoki Ohashi, UMI 3629 CNRS-Saint Gobain-NIMS, NIMS, Tsukuba, Japan ; NIMS-Saint-Gobain COE for Advanced Materials, NIMS, Tsukuba, Japan ; Research Center for Functional Materials, NIMS, Tsukuba, Japan
Tetsuo Uchicoshi, UMI 3629 CNRS-Saint Gobain-NIMS, NIMS, Tsukuba, Japan ; Research Center for Functional Materials, NIMS, Tsukuba, Japan

Key Words: Thin film, Metal atom cluster, EPD.

Composite nanoarchitectures represent a new class of nanostructured entities that integrate various dissimilar nanoscale building blocks including clusters, particles, wires and films [1]. The heterogeneous composite nanostructured materials are composed by definition of multi-(nano)components, each tailored to address different requirements. As one of the nanocomponents, nanometer sized transition metal clusters (<2 nm), which consist of less than a few dozens of metal atoms, could be defined as a link between atom and nanoparticle [2-7]. In this presentation, the first preparation of functional thin films based on octahedral molybdenum metal clusters deposited on ITO glass substrate by EPD will be discussed in detail [8]. More generally, we will focus on our recent results on thin films for optical and energy applications [9-10].

References
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