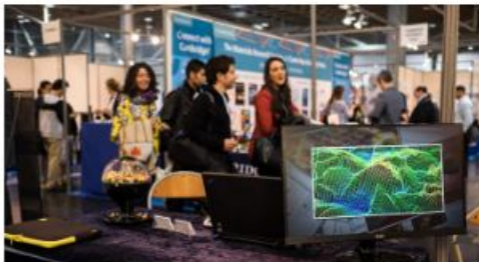


- 2023 ▾
- 2022 ▾
- 2021 ▾
- 2020 ▾
- 2019 ▾
- 2018 ▾
- 2017 ▾
- 2016 ▾

2016 Spring Meeting



The 2016 E-MRB Spring Meeting and Exhibit will be held in Lille (France) from May 2 to 6.

The conference will include 31 parallel symposia, 3 workshops & tutorials, one plenary session, one exhibition and much more. All technical sessions and non-technical events will be held at Lille Grand Palais.

May 2-6 2016

On-site payment hours:

Monday May 2 / 7:00 - 18:00 (7:00 - 13:00: registration only)

Tuesday May 3 / 8:00 - 18:00

Wednesday May 4 / 8:00 - 18:00

Thursday May 5 / 8:00 - 18:00

Friday May 6 / 8:00 - 17:00

Lille Grand Palais

1 Boulevard des Cité Unies

59777 Lille-Euralille



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From transparent conducting oxide to gas sensing applications of inverse spinel zinc stannate



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Resume : Zinc and Tin oxide is a promising In and Ga-free transparent semiconductors that demonstrated great potential as transparent conducting oxides in application like photovoltaic devices, flat panel displays, solar cells, due to its high electron mobility, high electrical conductivity, and low visible absorption [1]. Zn_2SnO_4 can also be applied to the field of gas sensing, if the resistance of the material is appropriate, that is not too conducting. We prepared Zn_2SnO_4 thin films by RF sputtering starting from sintered ceramic target with Zn:Sn ratio 2:1, investigation the influence of deposition parameters (oxygen content and substrate temperature) during deposition on the thin film properties. Amorphous films are obtained for deposition temperature up to 400°C, but they become crystalline (Zn_2SnO_4) after proper annealing treatment higher than 600°C. Annealing in air and in Ar resulted in porous film that are suitable for gas sensing. All films are transparent before and after annealing. We investigated optical properties of thin films by UV-VIS, Raman and photoluminescence spectroscopy and functional properties of thin films for gas sensing applications. The material demonstrated to have high potential for ethanol sensing of at 400°C and acetone at 300°C. Ternary thin films find also application in electronic nose for food analysis. References [1] Coutts TJ, Young DL, Li X, Mulligan WP, Wu X, J Vac Sci Technol 2000, A 18:2646-2660