

## Initiatives funded by the TO-BE Action

COST Actions do not provide research money but fund networking activities by:

- providing money for the organization of Scientific Meetings, Work Group roundtables and training schools;
- assigning grants to cover the participation costs for the events above;
- assigning grants to cover the costs of short term scientific missions aimed at performing joint experiments or other collaborative scientific activities.

### TO-BE events organised so far, including next forthcoming events:

TO-BE 2014 Fall meeting  
<http://to-be.spin.cnr.it/fallmeeting2014>  
University "La Sapienza", Rome IT  
September 22-23, 2014

TO-BE 2015 Spring Meeting  
<http://to-be.spin.cnr.it/springmeeting2015>  
University of Aveiro, Aveiro PT  
March 30 - April 2, 2015

TO-BE 2015 Fall meeting  
joint with EMRS Fall meeting, Symposium L  
<http://to-be.spin.cnr.it/fallmeeting2015>  
Warsaw University of Technology, Warsaw PL  
September 15-18, 2015

TO-BE 2016 Spring meeting  
<http://to-be.spin.cnr.it/springmeeting2016>  
University of Warwick, Coventry UK  
April 6-8, 2016

ISOE 2015 Training School  
International School of Oxide Electronics 2015  
<http://to-be.spin.cnr.it/trainingschool2015>  
CNRS- IESC, Cargèse, FR  
October 12-24, 2015,

## Preparing a Technology Roadmap for Transition Metal Oxides.

One of the major final objectives of the TO-BE Action is to prepare a technological roadmap for transition-metal oxides. Our methods and approach will be inspired by the analysis annually made within the International Technology Roadmap for Semiconductors.

The future Oxides Technology Roadmap aims at screening the envisaged applications of oxides and selecting those who offer a real potential for applications in the next few decades. It is expected to be used both as a self-analysis tool for the community of researchers active in oxides and as a dissemination tool allowing to spread knowledge about the potential of this class of materials to a wider scientific community, to policy makers and to the mainstream electronics industry.

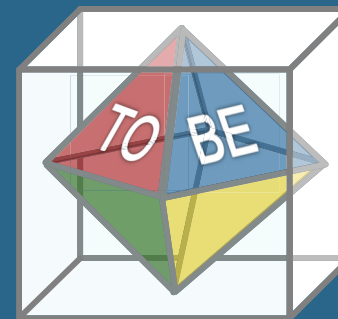
### How to join the TO-BE Action

The TO-BE Action is open to the participation by new scientists working in the countries that are already Action Parties. The application for becoming a registered Action participant can be filed by filling this form:

<http://to-be.spin.cnr.it/application-form>  
Registered Action participants will be informed of our initiatives on a regular basis and will be eligible to apply for our grants.

### Contacts

Action Chair: [fabio.miletto@spin.cnr.it](mailto:fabio.miletto@spin.cnr.it)  
General information, meetings: [tobe@spin.cnr.it](mailto:tobe@spin.cnr.it)  
Financial information: [tobeghm@spin.cnr.it](mailto:tobeghm@spin.cnr.it)  
Short term scientific missions: [stsm@tobe.spin.cnr.it](mailto:stsm@tobe.spin.cnr.it)  
Job posting on TO-BE website: [jobposting@tobe.spin.cnr.it](mailto:jobposting@tobe.spin.cnr.it)



### MP1308 COST Action

### Towards Oxide-Based Electronics (TO-BE)

<http://to-be.spin.cnr.it/>

Action Chair: Fabio Miletto Granozio

Action Vice Chair: Geetha Balakrishnan

Grant Holder Manager: Elisabetta Narducci

Grant Holder Institution: CNR-SPIN (IT)

Start of Action: 15/04/2014

End of Action: 14/04/2018



## Abstract

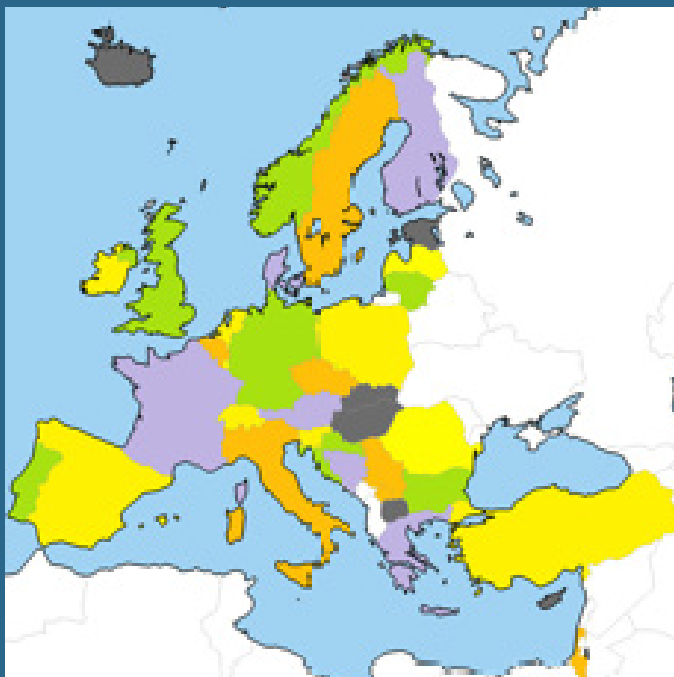
Transition-metal-oxide-based films and heterostructures are expected to be at the core of many next-generation nanoelectronic, microelectromechanical and macroelectronic devices. They are expected to impact fields of major social relevance, as digital information and communication technologies, micro-actuation/ micro-sensing and energy conversion.

The necessity to handle the unprecedented complexity of these materials rescales efforts of solid state scientists to a higher level and poses challenges that no individual Institution or Nations can face.

The **TO-BE Action** Action networks nationally- and EU-funded researches active on synthesis, analysis, modelling, and applications of transition metal oxides within the European Research Area. It aims at defining targets, strategies and methods; reducing fragmentation; aggregating communities with complementary know-how; disseminating information about the potential of complex oxides to other scientists, policy makers and industry; establishing a regular know-how transfer with private corporations and other stakeholders; building the future oxide electronics community by fostering the participation of early stage researchers and tackling gender unbalance.

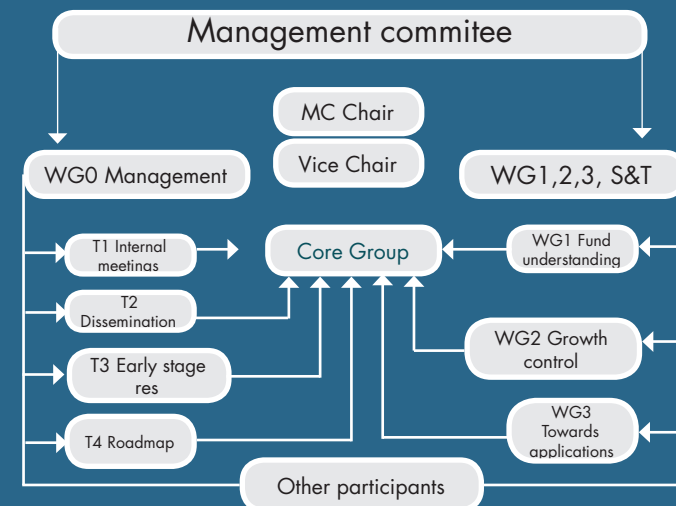
The success of the Action will strengthen the innovative capacity of EU industry by making qualitatively new enabling technologies accessible for commercial exploitation.

The Action web site <http://to-be.spin.cnr.it> acts both as a networking and a dissemination tool. Among other things, it contains information about past and incoming events, about calls for Short Term Scientific Missions and about job opportunities. We aim to pursue a web-based approach to keep the networking inside our community alive between the different Action meeting.



**List of Action Parties  
(participating countries)  
in June 2015**

1	Austria	15	Lithuania
2	Belgium	16	Luxembourg
3	Bulgaria	17	Netherlands
4	Croatia	18	Norway
5	Czech Republic	19	Poland
6	Denmark	20	Portugal
7	Finland	21	Romania
8	France	22	Serbia
9	Germany	23	Slovenia
10	Greece	24	Spain
11	Ireland	25	Sweden
12	Israel	26	Switzerland
13	Italy	27	Turkey
14	Latvia	28	United Kingdom



## Structure of the TO-BE Action

As every COST Action, TO-BE is managed by a very large board called Management Committee (MC), including representatives from all participating countries. MC members are appointed at a national level. The participants of the TO-BE Action, including MC members, are encouraged to join a Work Group (WG). TO-BE has four (WGs), as shown above. WG0 is in charge of the general Action organization, while WG1,2,3 pursue the networking of participants in terms of Science and Technology. All WGs are divided in Tasks. The WG leaders and the task leaders of WG0 join the Chair and Vice-Chair in the Action Core Group.

### TO-BE Core Group members

- Fabio Miletto Granzio: Action Chair & WG0 leader
- Geetha Balakrishnan: Action Vice Chair
- Jeroen Van Den Brink: WG1 "Fundamental Understanding" Leader
- Gertjan Koster: WG2 "Growth Control" Leader
- Nini Pryds: WG3 "Towards Application" Leader
- Rosalba Tatiana Fittipaldi: WG0-T1 Leader (Internal Meetings)
- Daniele Marré: WG0-T2 Leader (Dissemination)
- Laurence Mechin: WG0-T3 Leader (Early Stage Researchers)
- Josep Fontcuberta: WG0-T4 Leader (Oxide Technology Roadmap)