

MP1306

2014 | 2018

## EUSpec

### Modern Tools for Spectroscopy on Advanced Materials: a European Modelling Platform

#### Objectives

- The **main objective** is to gather theory activities in the field of spectroscopy to supply outstanding high level and up-to date support for demanding and sophisticated spectroscopy experiments
- Devise **new methods** to radically improve the description of spectroscopies and develop models for promising new ones
- **Extend the applicability** of the available spectroscopy codes to a very wide range of materials and spectroscopies
- **Promote collaborations** and transfer the know-how
- **Enhance the interaction** between theory and experiment

#### Working Groups

- The **WG Experiment** in charge of setting-up and establishing experiments to test and push theoretical models to their limits
- The **WG Correlation** in charge of the description of electron correlation (ground state and excited state)
- The **WG Time-Resolution** in charge of the description of femtosecond SR and XFEL spectroscopies
- The **WG Spectroscopy** in charge of the description of a wide range of spectroscopies and their implementation into the codes of the Action
- The **WG Platform** in charge of the integration of the codes into the platform website and of the cloud computing facility

#### Main Achievements

- Definition of **common format for data exchange** and corresponding I/O-tools
- Interface between **electronic structure and spectroscopy codes**
- **EUSpec codes**
  - **23 program packages** with authors member of **EUSpec**
  - **19 packages free of charge**
  - **4 packages** with special group rate or available at most computer centers
  - Info area + tools for common data format
  - Download area
  - Wiki-like manuals, corpus of knowledge
  - User's forum for each code
  - Cloud computing utility
  - **Training courses** for **EUSpec** codes
  - Creation of a **network of contact points (mediators) at ARSs**

#### Gender Balance and Early Stage Researcher

- Objectives: All activities of the Action will be used to work against gender imbalance and to promote the scientific career of early stage researchers
- Status: Selecting the various Action managers and deputy MC members priority has been given to female colleagues when available. As far as possible ESRs have and will be included in the management of the Action. Similar will apply for the approval of STSMs. At present 34% of the inscribed participants are female and 18% are ESRs.

#### Dissemination

- Webpage, quarterly newsletter, conference presentations
- Training courses, summer schools

Materials,  
Physics &  
Nanosciences  
(MPNS)



Participating countries: 21

AT, FR, IL, NL, SI, UK, BE, DE, IT, NO, ES, CZ, HU, LT, PL, SE, DK, IE, LU, PT, TR

Internat. Collaboration:

JP, RU (in progress)

Contact details

Chair of the Action

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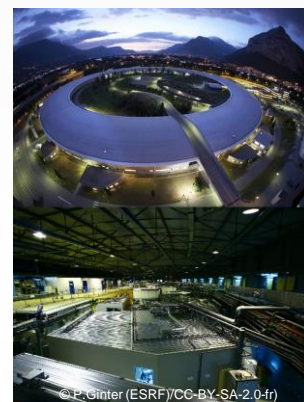
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Action Website

[www.euspec.eu](http://www.euspec.eu)



European Synchrotron Radiation Facility, Grenoble

EUSpec: High level theory for high level experiments



COST is supported by the EU RTD Framework Programme



ESF provides the COST Office through a European Commission contract