

# DRD2

ECFA-INFN March 31, 2023

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# DRD2: Detector R&D Collaboration for Liquid Detectors

- Questionario a marzo 2021
  - ECFA Detector Roadmap Liquid Detectors Symposium in aprile 2021
  - Survey pubblica a novembre 2022
  - Community meeting ad aprile 2023
- WP 1: Charge Readout
    - 1.1: Pixels
    - 1.2: Amplification
    - 1.3: Ion detection
    - 1.4: Dual (charge + light)
  - WP 2: Light Readout
    - 2.1: Increased sensor QE
    - 2.2: Higher efficiency WLS/collection
    - 2.3: Improved sensors for LS/Water
  - WP 3: Target Properties
    - 3.1: Doping & isotope loading
    - 3.2: Purification
    - 3.3: Optimization of light emission & transport
    - 3.4: Microphysics & characterization
  - WP4: Scaling-up challenges
    - 4.1: Radiopurity & bkg mitigation
    - 4.2: Detector & target procurement/production
    - 4.3 Large-area readout

# Technology areas leaders

## Charge Readout:

### - Pixels:

Jonathan Asaadi ([jonathan.asaadi@uta.edu](mailto:jonathan.asaadi@uta.edu)) & Roxanne Guenette ([roxanne.guenette@manchester.ac.uk](mailto:roxanne.guenette@manchester.ac.uk))

### - Amplification: electroluminescence and charge multiplication:

Alexander Deisting ([deisting@uni-mainz.de](mailto:deisting@uni-mainz.de)) & Fabian Kuger ([fabian.kuger@physik.uni-freiburg.de](mailto:fabian.kuger@physik.uni-freiburg.de))

### - Charge + light readouts:

Elena Gramellini ([elena.gramellini@manchester.ac.uk](mailto:elena.gramellini@manchester.ac.uk)) & Jonathan Asaadi ([jonathan.asaadi@uta.edu](mailto:jonathan.asaadi@uta.edu))

### - Charge to light readouts:

Kostas Mavrokoridis ([K.Mavrokoridis@liverpool.ac.uk](mailto:K.Mavrokoridis@liverpool.ac.uk))

## Light readout:

### - Increased sensor QE:

Jocelyn Monroe ([Jocelyn.Monroe@rhul.ac.uk](mailto:Jocelyn.Monroe@rhul.ac.uk))

### - Wavelength shifters and increasing light collection:

Marcin Kuzniak ([mkuzniak@camk.edu.pl](mailto:mkuzniak@camk.edu.pl)), Justo Martin-Albo ([justo.martin-albo@ific.uv.es](mailto:justo.martin-albo@ific.uv.es)), Clara Cuesta ([clara.cuesta@ciemat.es](mailto:clara.cuesta@ciemat.es))

### - Improved sensors for liquid scintillators and water detectors:

Mathieu Bongrand ([mathieu.bongrand@in2p3.fr](mailto:mathieu.bongrand@in2p3.fr)) & Tobias Lachenmaier ([tobias.lachenmaier@uni-tuebingen.de](mailto:tobias.lachenmaier@uni-tuebingen.de))

## Target Properties:

### - Doping and isotope loading:

Andrea Zani ([andrea.zani@cern.ch](mailto:andrea.zani@cern.ch)) & Hans Steiger ([hsteiger@uni-mainz.de](mailto:hsteiger@uni-mainz.de))

### - Purification:

Walter Bonivento ([Walter.Bonivento@cern.ch](mailto:Walter.Bonivento@cern.ch)) & Augusto Goretti ([augusto.goretti@lngs.infn.it](mailto:augusto.goretti@lngs.infn.it))

### - Light emission and transport:

Micheal Wurm ([michael.wurm@uni-mainz.de](mailto:michael.wurm@uni-mainz.de)), Stefan Schoppmann ([stefan.schoppmann@uni-mainz.de](mailto:stefan.schoppmann@uni-mainz.de)), Andrzej Szelc ([a.szelc@ed.ac.uk](mailto:a.szelc@ed.ac.uk))

### - Microphysics and Characterization:

Marie-Cecile Piro ([marieccci@ualberta.ca](mailto:marieccci@ualberta.ca)) & Davide Franco ([dfranco@in2p3.fr](mailto:dfranco@in2p3.fr))

## Scaling-up Challenges:

### - Radiopurity and background mitigation:

Roberto Santorelli ([roberto.santorelli@ciemat.es](mailto:roberto.santorelli@ciemat.es)) & Jim Dobson ([jim.dobson@kcl.ac.uk](mailto:jim.dobson@kcl.ac.uk))

### - Detector & Target procurement/production:

Walter Bonivento ([Walter.Bonivento@cern.ch](mailto:Walter.Bonivento@cern.ch)) & Minfan Yeh ([yeh@bnl.gov](mailto:yeh@bnl.gov))

### - Large-area readout:

Ines Gil-Botella ([ines.gil@ciemat.es](mailto:ines.gil@ciemat.es)), Jose Crespo ([jcrespo@ciemat.es](mailto:jcrespo@ciemat.es)), Giuliana Fiorillo ([giuliana.fiorillo@na.infn.it](mailto:giuliana.fiorillo@na.infn.it))

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