Preface

This Special Issue of the Journal of Supercritical Fluids includes invited manuscripts describing works presented orally during the 14th European Meeting on Supercritical Fluids (EMSF) that was held in Marseilles, France, over the period of May 18th–21st, 2014. The meeting was the 14th in the series of European meetings organized by the International Society for the Advancement of Supercritical Fluids (I.S.A.S.F.; www.isasf.net), a series which began about twenty years ago. The previous meeting was held in The Hague, the Netherlands, in 2011. The next conference in the series will be held in Essen, Germany in May 2016.

As with earlier conferences, the main objective of the meeting was to gather together the members of the supercritical fluid community from academia and industry and give them the opportunity to provide a critical up-date on the different applications, current technologies and the latest innovations. The organizers were extremely pleased to welcome about 300 scientists and engineers from 35 countries, including Algeria (8), Argentina (1), Austria (2), Brazil (16), Canada (5), Colombia (2), Croatia (1), Czech Republic (6), Denmark (1), Estonia (3), Finland (2), France (102), Germany (19), Italy (11), Japan (12), Korea (1), Malaysia (1), Mexico (2), Morocco (1), Nigeria (4), Portugal (18), Russia (9), Slovenia (3), South Africa (4), Spain (28), Sweden (3), Switzerland (1), The Netherlands (2), Taiwan (3), Turkey (9), United Kingdom (14), USA (3). Among the participants 10 were also members of the Editorial Board of the Journal of Supercritical Fluids.

The main scientific themes that were covered during the meeting were:

- (a) *Life and sustainable health*: Food, nutraceutical, pharmaceutical and cosmetic products, medical devices processing by supercritical fluids;
- (b) *Material science*: Elaboration of innovative materials: microelectronics, ceramics, catalysts, paints, textiles, insulation;
- (c) *Energy and environment*: Biomass valorization and biofuel production using supercritical fluids, waste remediation, recycling and/or valorization;
- (d) *Green chemistry*: Chemical and biochemical reactions in sub- and supercritical media, biobased raw materials, alternative solvents;
- (e) *Supercritical fluid properties, thermodynamics and analytics*: Transfer phenomena, physico-chemical properties and fluid

phase equilibria, microfluidics, supercritical fluid chromatography.

These themes were addressed in more than 100 oral presentations, including 3 plenary and 15 keynote lectures. The Plenary Lectures were presented by Professors Jerry King (USA), Tadafumi Adschiri (Japan) and Steve Howdle (UK) who are internationally well recognized names.

A special activity during the meeting, a first of its kind, was a *Matchmaking Event on Supercritical Fluids* which was organized by Enterprise Europe Network represented by Méditerranée Technologies, TRIMATEC, IFS, ISASF and Aix Marseille University. During the event, members of the research community, industry including small and medium sized enterprises (SMEs) and technical associations participated in individual and personalized face-to-face meetings, to discuss and share their interest in cutting edge technologies using supercritical fluids in order to develop new collaborations (joint venture, license, subcontracting or R&D partnerships). This event gathered 53 participants from 8 countries for more than 100 interviews.

This Special Issue includes 26 full papers based on the 100 oral presentations of the meeting. We would like to thank all the contributors for choosing to publish their works in this Special Issue. The manuscripts cover the several themes that are fairly representative of the scientific topics discussed during the congress. Even though not exclusive, the major focus is on the use of supercritical carbon dioxide. We hope that this Special Issue will be a new and welcome source of information for all the students, researchers and professionals working in this fascinating domain.

We would like to take this opportunity to thank our co-chairmen, Drs. Michel Perrut and Stéphane Sarrade, all the members of the international Scientific Committee, and the members of the local organizing committee, in particular Professor Olivier Boutin and Drs. Christelle Crampon, Jean-Henry Ferrasse, Yasmine Masmoudi and Adil Mouahid. We also would like to thank the following companies and organizations for their financial support: Aix Marseille University, *la Région PACA*, *le Conseil Général des Bouches-du-Rhône*, the city of Marseilles, FEYECON, SEPAREX, WATERS, NATEX, LEWA, Pierre FABRE laboratories, the French Atomic Commission (CEA), the competitive cluster TRIMATEC, *Innovation Fluides Supercritiques* (IFS) and Critical Fluid Symposia (CFS).

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Regards

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