1.	Record Nr.	UNISA996418192803316
	Titolo	Substitution and tiling dynamics : introduction to self-inducing structures : CIRM Jean-Morlet Chair, Fall 2017 / / Shigeki Akiyama, Pierre Arnoux, editors
	Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2020] Â©2020
	ISBN	3-030-57666-3
	Edizione	[1st ed. 2020.]
	Descrizione fisica	1 online resource (XIX, 456 p. 144 illus., 51 illus. in color.)
	Collana	Lecture Notes in Mathematics, , 1617-9692 ; ; Volume 2273
	Disciplina	511.5
	Soggetti	Tiling (Mathematics) Sequences (Mathematics)
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	Delone sets and dynamical systems -- Introduction to hierarchical tiling dynamical systems -- S-adic sequences : dynamics, arithmetic, and geometry -- Operators and Algebras for Aperiodic Tilings -- From games to morphisms -- The Undecidability of the Domino Problem -- Renormalisation for block substitutions -- Yet another characterization of the Pisot conjecture.
	Sommario/riassunto	This book presents a panorama of recent developments in the theory of tilings and related dynamical systems. It contains an expanded version of courses given in 2017 at the research school associated with the Jean-Morlet chair program. Tilings have been designed, used and studied for centuries in various contexts. This field grew significantly after the discovery of aperiodic self-similar tilings in the 60s, linked to the proof of the undecidability of the Domino problem, and was driven futher by Dan Shechtman's discovery of quasicrystals in 1984. Tiling problems establish a bridge between the mutually influential fields of geometry, dynamical systems, aperiodic order, computer science, number theory, algebra and logic. The main properties of tiling dynamical systems are covered, with expositions on recent results in self-similarity (and its generalizations, fusions rules and S-adic systems), algebraic developments connected to physics, games and undecidability questions, and the spectrum of substitution tilings.

2.	Record Nr.	UNINA9910166645003321
	Autore	Jose Alejandro Heredia-Guerrero
	Titolo	Non-Polysaccharide Plant Polymeric Materials
	Pubbl/distr/stampa	Frontiers Media SA, 2016
	Descrizione fisica	1 online resource (61 p.)
	Collana	Frontiers Research Topics
	Soggetti	Chemistry
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Sommario/riassunto	Plants are the most important renewable source of feedstock for polymeric materials. They are a resource of monomers and macromolecules after the appropriate chemical treatment. By analogy with the petrochemistry industry, plant macromolecules are depolymerized into simpler units which are generally chemically modified and re-bound to produce new polymers. The properties of these polymers are usually tailored by small chemical changes in their molecular structure, or by the polymerization of plant monomers with other molecules. Another interesting strategy for the formation of polymeric materials is the direct use of plant macromolecules in the form of blends, composites, grafted polymers, multilayer systems, etc. The interactions and assemblies of the different components allow the control of the final features of such materials. Traditionally, polysaccharides, with cellulose as the main protagonist, have been the most used substances. However, as consequence of a growing demand of functional plastics, other plant macromolecules, habitually considered wastes, have started to become valuable raw materials. Lignin and plant proteins (mainly, soy protein, wheat gluten, and zein) are classical examples. Also, suberin has been highlighted in this field. Other plant polymers such as the cutin and the sporopollenin are promising alternatives. Furthermore, other minority plant polymers, e. g. cutan or algaenan, could be potential sources of materials. The

different chemistry, structure, intrinsic properties and functions of these macromolecules in the plants are a strong inspiration for the development of novel and interesting polymeric materials. Here, in this Research Topic, we welcome the submission of manuscripts related to the production, extraction, processability, synthesis, characterization and applications of non-polysaccharides plant materials.