



HZB Helmholtz
Zentrum Berlin

Sciencefood

INTERNATIONAL

Recipes by researchers



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Our employees recommend international specialities



A homemade dish can put a smile on one’s lips. In most parts of the world, hospitality is more than just a custom. Eating, talking and laughing together connects people from all nations. There are people from many different countries working at Helmholtz-Zentrum Berlin and enriching each other’s lives. Employees and guest researchers from six continents have put together specialities from their home countries for this cookbook. Be inspired by this culinary journey across the globe.

Happy cooking!



INTERNATIONALITY

48 percent of our researchers come from abroad or do not have a German passport. This shows that our research teams are very international and work together to develop new materials for the climate-neutral energy supply of the future with creative ideas.

Starters and soups





Photo: J. Bierbaum

“I have been organising many different events and other projects as part of the communications department for over 10 years. My favourite annual event is the ‘Lange Nacht der Wissenschaften’ (Long Night of the Sciences). I love to develop new ideas with my colleagues.”

By Jennifer Bierbaum from Germany

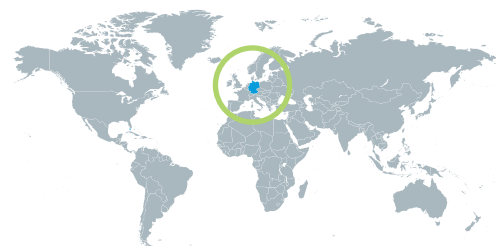


Photo: J. Bierbaum

Vegetarian



Starters and soups

Gemüsecrèmesuppe

Cream of vegetable soup

Ingredients for 4 persons

- 1 medium onion
- 1 small celeriac (approx. 250 g)
- 5 carrots (approx. 250 g)
- 8 potatoes (approx. 500 g)
- 2 tablespoons olive oil for frying
- 2 bay leaves
- 7 pimento seeds
-  1 litre vegetable stock
-  250 g soy cream
(alternative cooking cream)
- salt
- pepper
- parsley
- croutons made from 3 slices of
toast and a good piece of butter
-  (or vegan alternative)

Guten Appetit!

Peel all the vegetables and cut them into rough cubes. Put the oil and onions in a large pot and sauté, then add the rest of the vegetables and sauté briefly.

Then carefully deglaze with the stock. The vegetables must be covered with liquid just under a finger's width. Add the bay leaves and pimento seeds. Let it simmer for about 20 minutes with the lid closed or until the vegetables easily slip off an inserted knife. Remove the saucepan from the heat and, as the very first and most important point, pick out the bay leaves and pimento seeds. Then, using a hand blender, puree until nice and creamy. Then add the cream and stir it in. Season with salt and pepper. Cut the three slices of toast into cubes and heat a good bit of butter in a pan and fry the cubes in it until crispy.

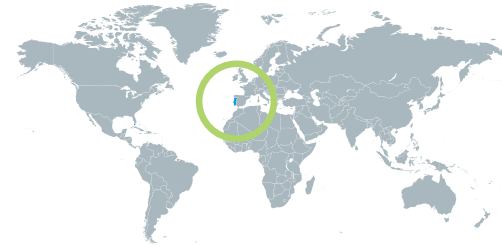
Serve the soup with the croutons and some parsley.

Tip: You can vary the vegetables to quite a degree, as long as it is always a similar total amount.

By Ana Sofia Freire Anselmo from Portugal



"I am currently at the Director's Office working on International Matters. Before that I was part of the User Co-ordination team, managing access to our facilities of researchers from all over the world."



Vegetarian



Starters and soups

Peixinhos da Horta

Fake fried fish

Ingredients for 4 persons

500 g flat green beans
2 eggs
100 ml water
150 g flour
salt
pepper
oil for deep frying

Arroz de Tomate (tomato rice)

1 onion
1 clove of garlic
1 bay leaf
olive oil
2–3 peeled tomatoes
200 g rice
water
salt

Wash the green beans and cut off the ends. If too long, cut to about 10 to 15 cm-long pieces. Boil in salted water for up to 5 minutes (they should still be firm and slightly undercooked).

Make a thick batter with the eggs, water and flour, and season with salt and pepper. Coat each green bean piece in the batter and deep fry in hot oil until golden. Drain the excess oil over a net or grid.

For the tomato rice: Fry a finely chopped onion and a bay leaf in olive oil. When the onion is translucent, add a chopped garlic clove. Add peeled and diced tomatoes. Let it cook for a bit. Add the rice (a starchy sort) and stir. Then add water (3 times the rice volume), season with salt and let it cook. Remove from the heat while there is still some liquid left.

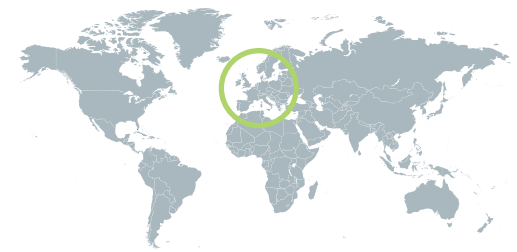
"Translated literally, it means 'little fish from the garden'. It's great as a snack served with a dip, for example aioli. It could also be a light meal if you pair it with Arroz de Tomate."

Bom apetite!



Anna Manzoni worked on a new class of metallic materials, called high entropy alloys. These materials will hopefully be used in turbine applications one day.

By Anna Manzoni from Luxembourg



Starters and soups

Feuerstengszalot

Fire stone salad

Ingredients for 6 persons

500 g cold cooked beef (roast beef or a prime boiled beef like tafelspitz)

2 onions

2 eggs

1 small dill pickle

Sauce

4–6 tbsp oil

1 tbsp mustard

fresh parsley

fresh chives

salt

pepper

Decoration

1 egg

capers

tomatoes

parsley

chives

Remove fat and gristle from the cooked beef and cut it into cubes about one centimetre in size. Chop the onions. Hard boil the eggs. Cut 2 of them into slices and then cut the slices into strips. Cut the dill pickle into slices and then into strips. Mix the beef with the onions, dill pickle and the eggs.

Mix oil, mustard, salt and pepper to a salad dressing. Add the finely chopped parsley and chives – lots of them: don't stint! Toss them together with the beef salad. Let it rest for about 1 hour.

Serve the salad – garnished with parsley and chives, the third egg (quartered), tomatoes and capers.

Gudden Appetit!

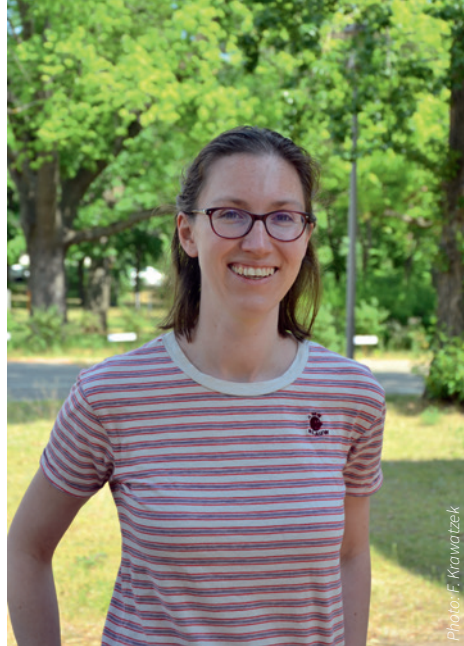
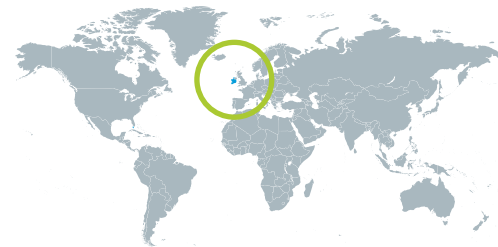


Photo: F. Krawatzek

By Oonagh Mannix from Ireland



“I have been working for the Helmholtz Metadata Collaboration since 2020. We want to make research data findable and accessible for the entire scientific community. In my free time I like to cook – for hours if possible.”



Photo: Adobe Stock

Vegetarian



Starters and soups



Irish soda bread

A traditional Irish recipe

Mix dry ingredients in a large bowl. Add buttermilk and mix. Unlike yeast bread, do not knead. Place on a floured surface and roll out round, then cut a cross in the top. Bake at 180 °C for about 45 minutes.

When fully baked, the bread makes a hollow sound when tapped.

Ingredients for 10 persons

- 3 cups flour
- 1 cup wheat bran
- ½ cup wheat germ
- ¼ cup mixed seeds (e.g. pumpkin and flax seeds)
- 1 tsp baking powder
- approx. 750 ml buttermilk

Enjoy!



Rowshanak Irani investigated absorber and catalyst materials for photoelectrodes used in the production of solar fuels at HZB.

By Rowshanak Irani from Iran



کشک بادمجان

Kashke Bademjan

Ingredients for 6 persons

- oil
- 4 eggplants
- 1 large onion
- 4 cloves garlic
- ½ tsp turmeric
- ½ tsp black pepper
- ¼ cup water
- ¾ cup liquid kashk (Iranian yogurt)
- 1 tsp saffron
- 2 tbsp dried mint
- ½ cup chopped walnuts

First fry the peeled eggplants and the chopped onion in separate pans. When both are fried well, mix them and add turmeric and black pepper. Stir and mix well.

Add ¼ cup of water, then cover and cook for about 15 minutes. Mash the mixture well.

Then add kashk, half of the dried mint, the chopped walnuts and the saffron, stir well and cook all of it for about 10 minutes over medium heat.

Sautee the chopped garlic and remaining dried mint separately to serve on top of the Kashke Bademjan along with some extra kashk.

“Kashke Bademjan is a very tasty vegetarian appetizer. It is usually served with bread.”

Nooshe Jan!

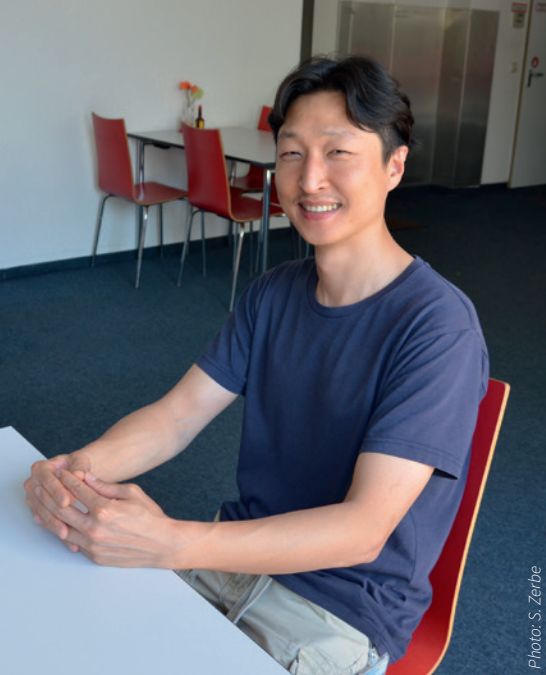
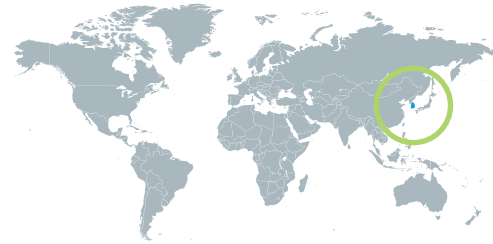


Photo: S. Zerbe

Won Kyu Kim worked as a theoretical physicist at HZB. He developed models for polymer networks in order to transport dissolved substances and proteins. This would make it possible in future to control the release of active substances in cells.

By Won Kyu Kim from South Korea



Starters and soups

오이 무침 *Oi muchim*

Korean cucumber salad

Ingredients for 4 persons

- 1 cucumber
- 1½ tbsp salt
- 1 tsp sugar
- 1 tbsp vinegar
- 1 clove of garlic, chopped
- ½ tsp ground black pepper
- 2 tsp sesame oil
- 2 tsp sesame seeds
- 1 tsp chilli flakes
(optional)
- 1 tbsp Korean soy sauce

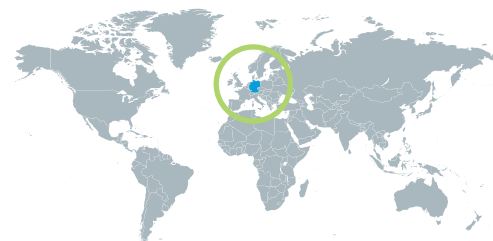
Cut the cucumber into thin slices and place in a large bowl. Add salt and wait 5 to 10 minutes. Rinse the cucumber with cold water. Add the other ingredients and mix well.





Photo: F. Schwarzbach

By Felicia Laberer from Germany



“I am a trainee for office management in the 3rd year of my apprenticeship and work in different departments of HZB. In my free time, I do para-canoeing and I am in the German national team.”



Photo: Adobe Stock

Vegetarian



Starters and soups

Erbsensuppe

Pea soup

Ingredients for 4 persons

- 1 medium onion
- 1 tbsp oil
- 400 g peas, fresh or frozen
- 500 ml water
- 1–2 tsp vegetable stock
- 200 g cream or
-  vegan alternative
- salt
- nutmeg
- pepper

For the pea soup, dice the onion. Put the oil and the onions in a pot and sweat them gently over low heat until they are see-through.

Deglaze with 500 ml of water and add the vegetable stock. Add the peas and bring to a boil. Then add the cream. Purée the peas with a blender to a fine soup.

Season the soup with salt and pepper and a little nutmeg. If you like, you can serve it with baguette or white bread.

Guten Appetit!



With a prize from the Alexander von Humboldt Foundation, Oguz Okay spent a year researching organic polymer compounds at HZB. With the so-called self-healing hydrogels, cuts and cracks close by themselves.

By Oguz Okay from Turkey



Starters and soups

Imam Bayildi

Stuffed eggplants

Ingredients for 6 persons

3 eggplants
2 onions
2 tomatoes
1 bunch parsley
garlic (*optional*)
green pepper
sea salt
olive oil
water

Halve the eggplants, sprinkle with sea salt and leave to marinate for 15 minutes. In the meantime, prepare the filling: Chop the onions very finely, salt them, fry them and let them cool a little. Add two finely chopped tomatoes, the chopped garlic and parsley, season with green pepper and mix well.

Take the eggplants, hollow them out with a spoon and fill them with the tomato/onion mixture. Steam the eggplants in a pan with a little olive oil and water until they are soft, remove from the heat and let them cool. Serve Imam Bayildi cold with flat bread.

“The recipe name means ‘the imam passed out.’ Legend has it that the Imam enjoyed the dish so much that he fainted.”

Afiyet olsun!



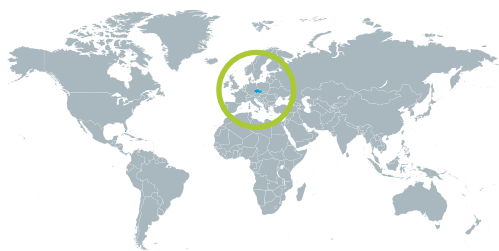
YOUNG TALENTS

143 doctoral students are conducting research at HZB and qualifying for a career within and outside of science. In addition, almost 50 trainees and students at HZB are preparing for a successful start to their careers.

Main courses

By Karel Prokes from the Czech Republic

“After the reactor shutdown I am trying on one hand to analyse and publish all the data sets I took during many years when the reactor was running. On the other hand, I am learning as much as possible from my colleagues to be able to operate the Corelab Quantum Materials.”



“The preparation of this classic Czech dish takes about 18–24 hours. But it is worth it. Bread dumplings (houskový knedlík) are served with meat – they belong to the national culinary heritage. However, they are not easy to make, which is why they can also be bought. A portion traditionally consists of four slices.”



Svičková na Smetaně

Beef sirloin in cream sauce

Ingredients for 5 persons

- 750 g of the finest beef sirloin
- 150 g carrots
- 150 g celery
- 75 g parsley
- 1 large onion
- 50 g bacon chopped into small wedges
- 150 g butter
- vinegar
- 5 peppercorns
- 3 piment corns
- 3 bay leaves
- a pinch of thyme, lemon juice, sugar
- oil
- 100 g mustard (optional)
- 250 ml sour cream
- lemon slices
- cranberry sauce
- salt
- pepper
- water or beef stock
- whipped cream
- Czech Dumplings

Make small cuts in the meat with a knife and fill with bacon. Sprinkle with salt and pepper. Place the meat in a glass or ceramic roaster. Surround with the chopped vegetables. Sprinkle with thyme, parsley, piment and peppercorns. Add vinegar, bay leaves and two tablespoons of oil. If necessary, add some water or vinegar to cover the meat. Put in the fridge for 18 to 24 hours. Turn the meat occasionally. The next day: remove the fillet from the marinade and pat dry. Heat 2 tablespoons of oil in a pan. Brown the meat everywhere and take it out again. Pour some water into the pan and bring to the boil. Pour the juice as a marinade over the roast. Put butter (or lard) on the meat. Fry together with the vegetables for 1 ½ hours at 175 °C in the oven. Then drain the vegetables and liquid and puree. Meanwhile keep the meat in a warm oven (below 50 degrees). Heat the vegetable puree in a saucepan. Season with salt and pepper - optionally with mustard. Add lemon juice and sugar. If necessary, dilute with some water or beef stock. Shortly before serving, stir in sour cream (do not boil). Cut the meat into slices and serve with Czech dumplings and the cream sauce. Traditionally you put some cranberry sauce, a slice of lemon and whipped cream on the meat.

Dobrou chuť !

By Margarita Russina from Kazakhstan



“I am the head of ‘Battery and Neutrons’ group within the department of Electrochemical Energy Storage. We are investigating confinement phenomena and transport processes of ions, liquids and gases in porous materials using neutron scattering methods.”



“This is one of my favorite dishes which comes from the country I was born in – Kazakhstan –, and is particularly suitable for cold winter days. Besh means ‘five’ and ‘barmak’ means fingers. Since Kazakhs were mostly nomadic in olden times, they would eat this dish with their hands, using all five fingers. Typically it is cooked with either horse meat or lamb, but in our family we cooked it with chicken. The dish is served with a bowl of the broth on the side called ‘Sorpa.’”



Бешбармак

Beshbarmak · “Five fingers”

Ingredients for 6 persons

1 kg lamb or one good quality
fat chicken
2 large onions
1 bay leaf
1 piment corn
salt
pepper
some parsley and chives

For the noodles

(use alternatively lasagna
noodles)
1 egg
½ cup water
½ tsp salt
300 g plain flour

Cook the meat with the onionrings, bay leaf, salt and one piment corn with an amount of water covering the meat. When boiling, remove the foam. Cover the pan and let it cook until the meat is tender and falling off the bone (approx. 1 hour for chicken, 2 hours for lamb).

Meanwhile, prepare noodle dough. In a bowl mix the sifted flour, the whisked egg and salt, then pour water until a dough is formed. It should be not too sticky, otherwise add more flour. Put it in a plastic wrap and leave for 20–30 minutes. Afterwards sprinkle the work top with sifted flour, divide your dough into a few small balls and roll each piece of pastry into a fairly thin layer. Cut into pieces not too small and leave it dry a little.

Cut the onion into rings. Skim the top layer of fat off the broth and cook the onions briefly in this fat with a lot of freshly ground pepper. Remove the meat from the broth and separate into parts as you wish.

Bring the remaining broth to a boil and cook the noodles in batches in the broth for about 7–8 minutes. Sieve out the noodles (keeping the broth) and put them on a large plate. Put the pieces of meat on top and pour the previous onion/pepper mixture over it. Sprinkle some chives and parsley to garnish over the top. Strain the broth and serve in bowls as ‘Sorpa’ alongside the platter of Beshbarmak.

Приятного аппетита!

By Félix Duarte from Mexico



Photo: J. Böhm

“Green energy is definitely something we should be doing. Contributing a little to this is a worthy goal in life.

I am working at a BESSY II beamline, on which deep layers in solar cells, batteries or systems for solar water splitting can be investigated.”



Photo: J. Böhm

Main courses

Chicken Fajitas

Mexican chicken and vegetable pan

Ingredients for 4 persons

- 600 g chicken breast
- 4 tbsp olive oil
- 3 cloves of garlic
- 1 medium-sized tomato
- ½ of an onion
- 3 medium-sized bell peppers (a red-, yellow- and green-colored set)
- chicken stock powder
- salt
- pepper

Heat oil in a pan and fry garlic until it gets slightly browned. Cut chicken in 2 cm stripes. Add salt, pepper and chicken stock powder on top. Fry chicken in high heat for approximately 5 minutes, turning the chicken when necessary. Cover pan and leave it cooking on low heat for another 5 minutes.

Remove lid and introduce the sliced onion. Stir and let it cook for 1 minute.

Then, add bell peppers – cut into stripes – and diced tomato into the mix, while stirring constantly. Cook until the peppers get the desired level of tenderness. Serve hot.

¡Buen provecho!

By Catalina Jiménez from Argentina

“I am a scientist in the energy research laboratory EMIL at BESSY II. I investigate materials for fuel cells using in-operando methods.”



“Empanada pastries simply belong to traditional Argentine cuisine. They can be found at elegant parties, as appetizers before ‘Asado’ or on the streets. They are easy to store in a freezer. The filling can be anything, but beef is the most common choice in Argentina.”



Empanadas

Filled pastries

Ingredients for 6–8 persons

750 g minced beef meet
4 onions (approx. 750 g), chopped in small cubes
1 bunch of spring onions, rinsed and chopped
50 g raisins
50 g bacon cubes (optional)
4 tsp olive oil
1 bouillon cube
2 tsp cumin
1 tsp hot paprika (or sweet paprika)
2 boiled eggs, chopped in cubes
50 g green pitted olives, chopped
24 dough discs for Empanadas
salt
pepper
1 egg yolk

Put the olive oil in a pan. Cook the onions, spring onions, raisins and bacon over medium heat for 5–10 minutes. Add salt and pepper. Add the minced meat, cumin, hot paprika and the bouillon cube. Let it cook for 20 minutes, stirring from time to time. Add eggs and olives and let cool down. Peel off the dough discs one at the time from the stack. Wet the borders of the discs with water. Put one disc on the palm of your hand. The wet borders should be facing you. Put 1 ½ tablespoon of filling in the middle. Close the disc, pressing the borders using the tips of your fingers. Put the empanadas on a baking tray. Paint with egg yolk. Bake them for 15–20 minutes at 180 °C in circulating air or 200 °C with conventional top+bottom heating.

¡Buen provecho!

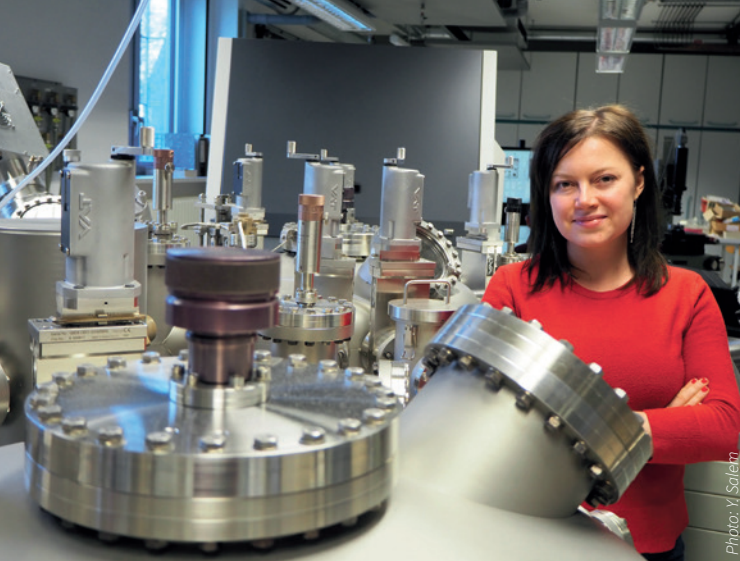


Photo: Y. Salem

“I lead the Helmholtz Young Investigators Group ‘Dynamic Electrocatalytic Interfaces’ at HZB and the Helmholtz Institute Erlangen-Nürnberg for Renewable Energy. We want to find out why catalysts for green hydrogen production are limited in efficiency.”

By Olga Kasian from Ukraine



Photo: T. Sondernann



Main courses

Печінковий тортик

Liver pie with carrots

Ingredients for 4–5 persons

- 700 g chicken liver
- 200 g carrots
- 200 g onions
- 100 g flour
- 100 ml milk
- 2 eggs
- mayonnaise or sour cream
- salt
- pepper
- oil

Chop the onions and finely grate the carrots. Fry the onions and carrots in the oil and set aside. Put the liver through a meat grinder. Add eggs to the liver and mix well. Then stir in milk, followed by flour. Add salt and pepper.

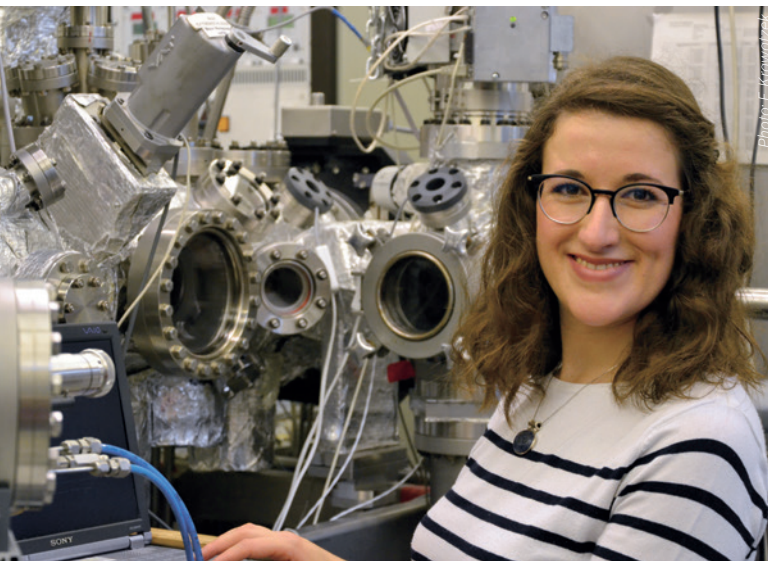
In a frying pan with oil over medium heat, fry about 5 liver pancakes, 16 centimetres in diameter, for 5 minutes on each side. Spread the liver pancake with mayonnaise or sour cream, spread on the carrot and onion mixture and cover with the next liver pancake, etc.

Leave the pie to stand for a few hours and then decorate as desired.

насолоджуйтесь їжею

By Ivona Kafedjiska from North Macedonia

“I am writing my PhD thesis on perovskite CIGS tandem solar cells and am a PhD student speaker. In my spare time, I blog at jungle-dancer.com on very different topics: from research to nature to music and poetry.”



Musaka

Traditional casserole

Ingredients for 6 persons

- 450 g minced meat
- vegetarian dish: 450 g tofu
- 1 kg potatoes
- 2–3 onions
- 1 cup of rice
(not risotto or basmati)
- 3 large eggs
- 100–150 ml yogurt or milk
- salt
- pepper
- paprika to taste
- sunflower oil
- water
- optional:* parsley or mint

Dice the onions, cut the potatoes into thin slices. Put the oil in a pan and brown the rice and onions. Add minced meat and season. Do not fry completely.

Rub a baking dish with oil. Place the potato slices as the bottom layer, cover with the meat-rice mixture and top with a potato layer.

Pour boiling water over the entire contents of the baking dish. Bake at 200 °C convection oven until the water is almost gone – about 60 to 80 minutes.

Cover with beaten eggs, yogurt or milk and fresh herbs if you wish. Bake until firm.

Пријатен оброк!



By Israel Ibukun Olaniyan from Nigeria

“I am a PhD student in the institute ‘Functional Oxides for Energy-Efficient Information Technology’. I investigate the electrical polarisation patterns in nanostructured perovskites grown on silicon.”



“Ayamàsé is also called ofada or designer stew. It’s a very popular soup among the Yoruba people of Nigeria. Its origin can be traced to Ogun State Nigeria. ‘Aya’ means wife and ‘Mase’ is the name of a man. Therefore, Ayamàsé means ‘the wife of Màsé.’”

Ingredients for 2–3 persons

- 4 green bell peppers
- 1 habanero
- 1 large onion
- ¾ cup palm oil
- 2 boiled eggs
- 250 g of proteins of choice: beef, ponmo (cow skin), fish, chicken
- 1 ½ tbsp locust beans
- 2 ½ tbsp crayfish
- salt
- seasoning (bouillon cube)
- rice (f.e. ofada or jasmine)
- or spaghetti

Á gba bi ire!



Ayamàsé

Ofada stew

Blend the bell peppers and habanero together to a not so smooth texture. Pour your blended mixture into a pot and boil till it is dry. Heat the palm oil just hot enough for it to sizzle. Tip: When bleaching the palm oil, cover the pan with its lid to avoid smoke and let it cool down completely before removing the lid.

Add the locust beans to the palm oil and reheat the palmoil for about two minutes. Add the grated onion and fry for about 5 minutes. Pour in the blended bell peppers and habanero mixture and fry for another 15 minutes, season with salt and bouillon cube or powder to taste.

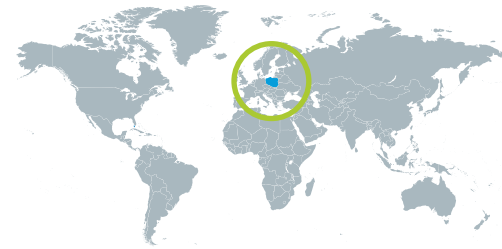
Your proteins come next, add your boiled eggs and let it cook for another 15 minutes. At this point, your eggs will look blackish, and then the wife of Màsé is ready to be eaten.

PS: Slightly leave the lid of the pan open after adding the crayfish. This allows the aroma to circulate into the atmosphere, thus making you salivate.

You can eat Ayamàsé with jasmine rice or spaghetti, but it also has its own pairing rice called ofada rice.

By Paul Goslawski from Poland

“I am an accelerator physicist and want to optimise the synchrotron radiation source for our users. We are working on concepts for a successor source BESSY III.”



Main courses



Pierogi ruskie

Dumplings with potato cottage cheese stuffing

Ingredients for 6 persons

Dough

350 g flour

1 egg

130 ml water

Filling

600 g potatoes

250 g cottage cheese

1 onion

Serving with

1 tbsp butter

200 ml sour cream

salt

pepper

For the filling: Peel the potatoes and boil them in salted water. Mash hot potatoes and mix with cottage cheese. Chop the onion into small pieces and roast until golden brown (can also be done with ham) and stir into the potato quark mixture. Season with salt and pepper. The filling must not contain any potato or quark lumps.

For the dough: Knead flour and egg with water and some salt. Roll out the dough thinly and cut out circles with a large glass. Put a spoonful of filling in the middle of the dough circle. Fold the dough to a half moon and carefully press down the edges.

Boil the dumplings in water. Stir carefully and once they float on the surface let them cook for 2–3 minutes.

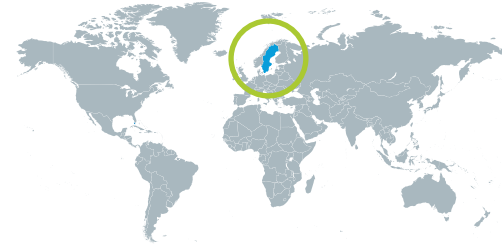
Serve with hot butter and sour cream on the side.

Smacznego!

By Nils Mårtensson from Sweden



“The University of Uppsala runs a lab with HZB: the Uppsala Berlin Joint Laboratory. Together, we have developed methods for functional materials that are not available at any other research institution.”



Raggmunk

Potato pancakes with bacon and cranberries

Ingredients for 6 persons

1 kg floury potatoes
1 egg
1 tbsp flour
2 tbsp water
oil
butter
salt
pepper
lightly salted bacon
500 g cranberries
200 g sugar

First grate the potatoes – e.g. King Edwards. Then mix an egg with flour and water. Add this mixture to the grated potatoes. Stir the dough, add salt and pepper.

Heat oil and butter in a pan, pour a large table-spoon of dough per buffer into the heated pan. Fry the pancake until the crust is light brown. Then turn the pancake over and fry the other side until light brown.

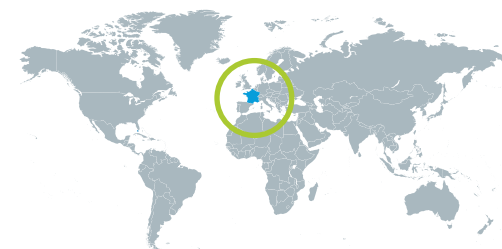
Add to the pancake lightly salted bacon and cold-stirred cranberries, which are mixed with the sugar until it has dissolved.

Smaklig måltid!



“I work as an officer for the promotion of young researchers, which means always being there for the young researchers at HZB, coaching and advising them. I also look after the topic of science awards.”

By Cécile Dufloux from France



Vegetarian



Pâté aux pommes de terre

Potato pie

Ingredients for 6–8 persons

- 2 layers puff pastry
- 1 kg potatoes
- 1 tub crème fraîche
- pepper
- salt
- 1 egg yolk or milk
- parsley

Cut potatoes into thin slices, mix with parsley and season. Put one layer of puff pastry in a form, spread the potatoes over the pastry. Cover with the other pastry layer and roll up the edges. Make a hole in the centre (chimney) with your finger. If necessary: brush with egg yolk (or milk) to make the dough golden brown.

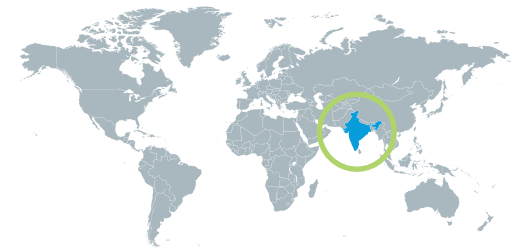
Preheat the oven to 170–180 °C and bake for about 45 minutes. After 45 min, loosen and lift the puff pastry lid to spread the crème fraîche underneath.

Put the lid back on and bake for another 10 to 15 minutes. Tastes great with a green salad.

Bon appétit!

By Sneha Choudhury from India

Sneha Choudhury investigated nanodiamonds at HZB that could become inexpensive catalysts. With sunlight, nanodiamonds can be catalytically activated and produce useful fuels from carbon dioxide and water.



Ingredients for 4 persons

1 kg large prawns
2 onions or 5 tbsp of onion paste
1 clove of garlic
1 tsp ginger paste
5–6 green chillies or 2–3 thin red chillies
400 ml coconut milk
130 ml water
4 small bay leaves
4 pieces of cardamom
6 cloves
2 small sticks cinnamon
red chilli powder
turmeric powder
sugar
salt
oil
basmati rice

Enjoy your meal!



Chingri machher malaikari

Prawn curry with coconut milk

Clean the prawns and marinate with turmeric and salt for 30 minutes. Grind the onions to a paste. Heat oil in a deep frying pan and fry the prawns lightly until golden brown, do not deep-fry. Remove the prawns and add the chopped garlic to the oil. Remove the garlic when the oil starts getting the garlic fragrance.

Add bay leaves. Coarsely crush the cardamom, cloves and cinnamon with a pestle and add to the oil. Add the onion paste when the spices start to crackle in the oil.

Fry the paste with some sugar until it is brown or the oil separates from the paste. Add the ginger paste and stir the spice mix. Add coconut milk and water and mix well.

Then add red chilli powder, very little turmeric powder and salt. Then add the green or red chillis and let the curry simmer for about 25 to 30 minutes. When the oil surfaces from the gravy, add the prawns and cook on low heat for a while till the curry gets a creamy consistency. Serve the prawn curry with basmati rice.



Photo: M. Seitzplanitz

Daniel Meza investigated various material mixtures in order to optimise the electrical contact layers in solar cells. They ensure that the electricity produced by sunlight is dissipated from the solar cells.

By Daniel Meza from Mexico



Photo: D. Meza



Quesadillas con champiñones y aguacate

Filled tortillas with mushrooms and cheese

Ingredients for 6 persons

- 6 tortillas/wraps
- 2 onions
- 500 g champignons
- 250 g cheese, e.g. Gouda
- 2–3 avocados
- jalapeños
- salt
- pepper
- butter

Cut the champignons and onions into small pieces. Fry them in butter and add salt and pepper. Then fold the tortillas or wraps in the middle, put some cheese inside, and place them on a pan at low heat so that the cheese melts, but the tortilla does not burn. When the cheese has melted, open the tortilla, and put the fried champignons and onions inside.

Then heat the tortillas in the oven at 180 °C so that the melted cheese fills the gaps between the champignons. Heat for a couple of minutes, and then serve on a plate, open it and put avocado and jalapeño slices in it.

“To make it a real Mexican snack, put some jalapeños inside the tortillas and say ‘mmh, delicioso!’ after each bite.”

¡Buen provecho!

By İbrahim Şimşek from Turkey



“My research topic is about inorganic perovskites as absorber materials for solar cells. Recently, I have been working on chalcogenide perovskites.”



Photo: İ. Şimşek

Main courses

Biber dolması

Rice beef stuffed bell peppers

Ingredients for 5 persons

10 bell peppers
200 g rice
200 g minced beef
2 onions
3 tomatoes
tomato paste
½ cup olive oil
½ bunch parsley
1 tsp chili powder
1 tsp pepper
½ tsp cumin
½ tsp salt
water

yoghurt or Cacık (Turkish tzatziki)



vegetarian alternative:

400 g rice
½ cup of raisins
a pinch of cinnamon
½ cup of pine nuts

Take out the tops of the bell peppers and remove the seeds. In a saucepan, place the olive oil and the finely chopped onions. Fry lightly. Add the minced beef. When the meat is cooked rare, add two peeled and diced tomatoes and 2 tbsp tomato paste, fry them for another 3 minutes. Add the rice and cook for 3 minutes. Then add salt, chopped parsley, chili powder, pepper and cumin. Let simmer until all liquid is evaporated. Fill the bell peppers with the mixture. Do not stuff too tightly as the rice will swell. Place a slice of tomato on top of each bell pepper and place in a saucepan. Fill half way up with water and some tomato paste. Close the lid and cook on medium heat for 25–30 minutes.

Serve with yoghurt or Cacık (Turkish tzatziki).

Afiyet olsun!

By Rowan MacQueen from Australia



"I am working on solar cells to be able to use a larger part of the solar spectrum. With molecules introduced, it should be possible to convert red into blue light. Our research is also interesting for more efficient solar hydrogen production."



Vegetarian



Main courses

Spicy strips

Vegetables with soya

Ingredients for 2-3 persons

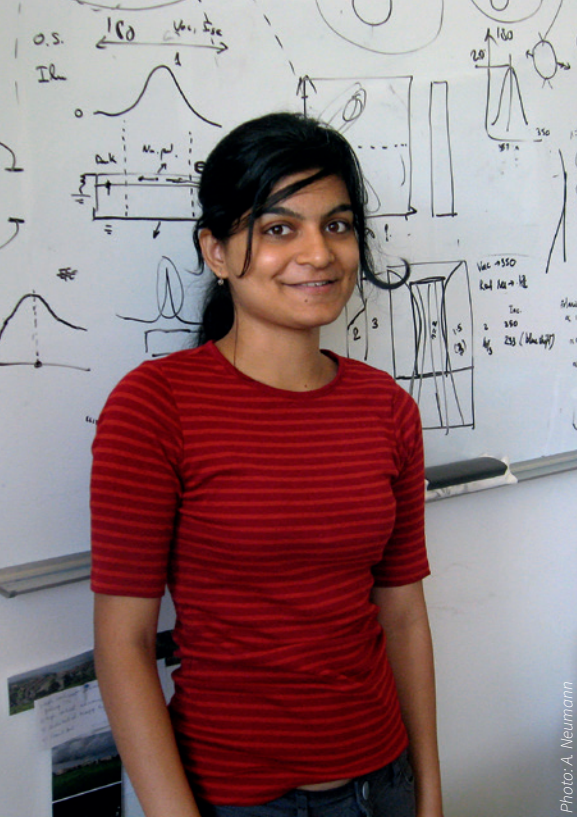
1 large onion
2-3 cloves of garlic (optional)
2 red bell peppers
1 head of broccoli
400 g soya strips
2-4 tsp sambal oelek
1 egg
peanut oil
rice

Cut the onion into cubes, chop the garlic and cut the bell peppers into long thin strips. Cut a head of broccoli into florets and cook the florets approx. 5 minutes.

Then heat the peanut oil in a deep-sided frying pan or a wok. Add the onion and half the sambal oelek, stir and don't let it burn. After a minute add the soya strips, then a minute later add the red bell peppers, broccoli florets and the remaining sambal oelek, keep stirring and keep the pan hot. Once cooked, turn the heat down, crack the egg into the pan and mix it together.

Serve it right away! This dish can be eaten with rice.

Enjoy your meal!



Gauri Mangalgi worked on improving light management in solar cells. She simulated nanostructures on the computer in order to optimise the incidence of light.

By Gauri Mangalgi from India

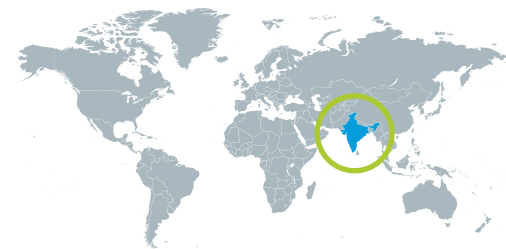


Photo: G. Mangalgi



Spicy yoghurt chicken

With garlic and ginger

Ingredients for 10 persons

- 10 pieces of chicken breast
- 200 g yoghurt
- 1 tbsp garlic ginger paste
- 1 tbsp chilli powder, mustard powder, sesame powder, cloves, and cardamom
- 1 pinch of sugar
- salt
- pepper
- optional:*
- 1 tbsp tomato paste
- 1 tbsp tamarind paste
- minced mint or cream

Chop chicken into moderate slices and sprinkle it with salt and pepper. Mix one tablespoon each of chilli powder, mustard powder, sesame powder, cloves, cardamom, garlic ginger paste and whip it. Add a pinch of sugar.

Prepare 200 g of fresh yoghurt into a wide bowl. Add the spices mixture to the yoghurt and mix finely until all ingredients are mixed well. For more mix of sweet and sour, one tablespoon of tomato paste and tamarind paste can be added as preference.

Then add the sliced chicken pieces to the yoghurt mix. Let it marinate for at least two hours. Make sure that all the pieces are soaked in yoghurt.

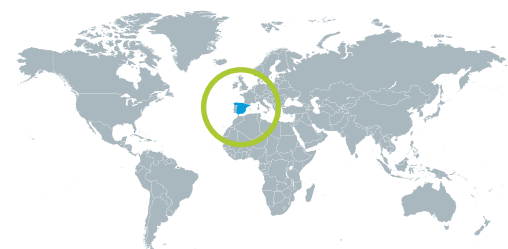
Heat oven to 250 °C for 10 minutes. Polish the baking tray with a thin layer of cooking oil and place the pieces on it. Cool down the oven to 200 °C and bake for 30 minutes. The chicken pieces can be served with minced mint or cream.

Enjoy your meal!



“I am the technical project manager for the VSR demo project. We are developing novel superconducting cavities for accelerator rings that have to withstand high currents and voltages.”

By Adolfo Velez Saiz from Spain



Tortilla de patata

Potato tart

Ingredients for 4 persons

600 g potatoes
6 eggs
1 onion
olive oil
salt
pepper

Peel the onion and cut it into cubes. Peel the potatoes, then cut them in half and cut each piece into thin half-moons. Put them in a pan with oil, salt and fry on low heat for 25–30 minutes. Drain the potatoes and clean the pan with kitchen paper.

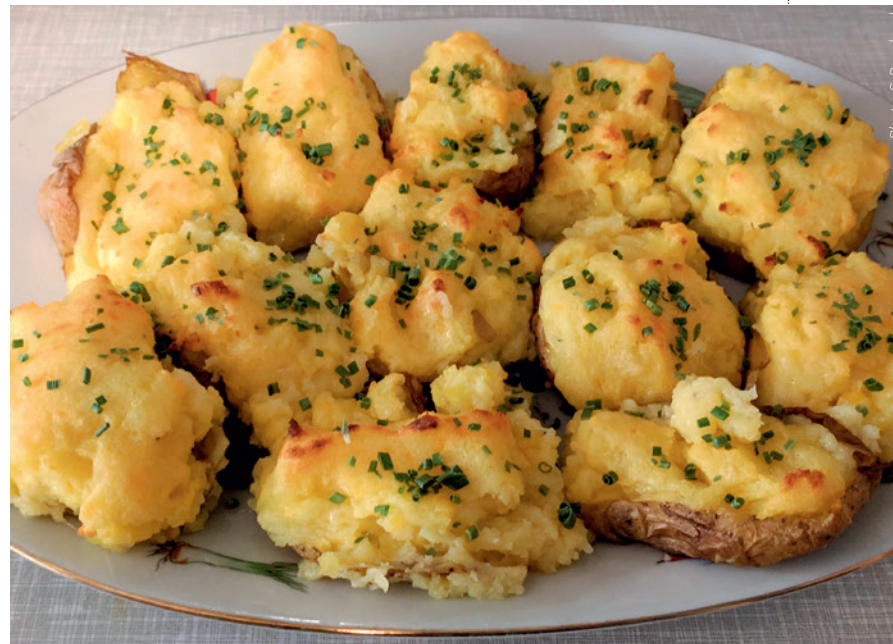
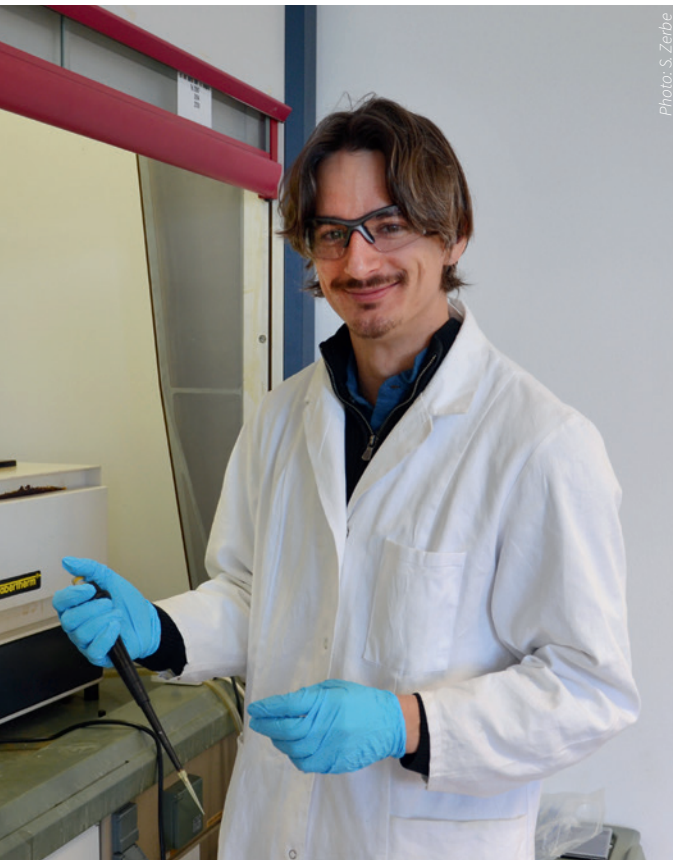
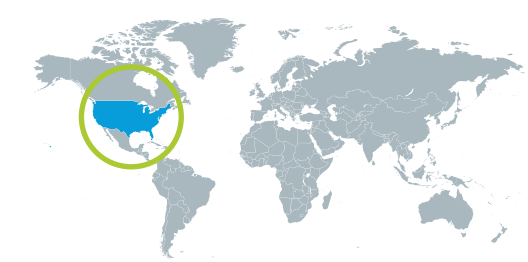
Beat eggs in a bowl. Then add potatoes, onions and pepper to the eggs, mix well, put a splash of oil in the pan and fry the whole mix. Stir a little with a wooden spoon and wait (20 seconds) for it to set.

Then cover the pan with a board whose diameter is larger than the pan and turn it all over to flip the tortilla de patata onto the board. Slide the tortilla back into the pan and let the other side set.

¡Buen provecho!

Sean Berglund investigated complex material systems consisting of various semiconductor compounds that use sunlight to split water into hydrogen and oxygen.

By Sean Berglund from the USA



Twice-baked potatoes

With cheddar cheese

Ingredients for 4 persons

- 4 large potatoes – e.g. Russet Burbank
- $\frac{1}{4}$ – $\frac{1}{2}$ cup milk
- $\frac{1}{4}$ cup warm butter or margarine
- $\frac{1}{4}$ tsp salt
- pepper
- 1 cup shredded cheddar cheese
- 1 tbsp chopped fresh chives

Heat oven to 190° C. Scrub potatoes, but do not peel. Poke potatoes several times with a fork. Bake 1 hour to 1 hour 15 minutes (until potatoes are tender when pierced in center with a fork). Remove potatoes from oven and let them cool. Then cut them lengthwise in half and scoop out the insides, leaving the brown skin as a shell. Mash the insides with a potato masher or electric mixer on low speed until there are not lumps. Add milk slowly and mash until potatoes are smooth. Add butter, salt and pepper; mash into potatoes until smooth. Stir in cheese and chives. Fill the potato skin shells with the mashed mixture and place on a cookie sheet. Increase oven temperature to 205 °C. Bake about 20 minutes.

Enjoy your meal!

“I work in the team that develops superconducting cavities for the VSR demo project. These components are necessary to accelerate the electron bunches. We want to show that it is possible to provide light pulses of variable length for experiments at synchrotrons.”



By Andriy Ushakov from Ukraine



Vegetarian



Main courses

Вареники

Wareniki with sour cherries

Ingredients for 6 persons

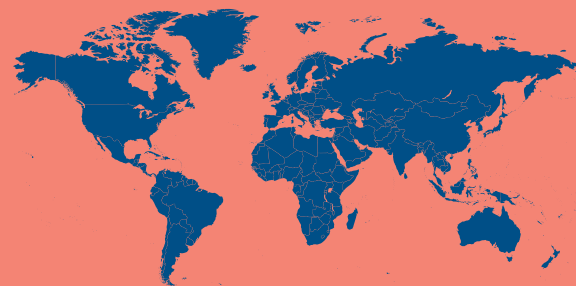
- 250 g fresh sour cherries
- 1 cup flour
- ½ cup water
- 1 ½ tbsp vegetable oil
- salt
- 3 tbsp sugar
- butter

Prepare a dough from flour, water, oil and a pinch of salt and roll out thinly. Cut small circles out of the dough, for example with an inverted cup and a knife. Add 3 cherries and half a teaspoon of sugar to each circle. Fold the circles together (see photo) and press the edges together.

Put into boiling water and leave to stand for a few minutes.

Then serve the Wareniki with melted butter.

Смачного!



ATTRACTIVE RESEARCH ENVIRONMENT

2700 visits of guest researchers
from Germany and abroad
are recorded every year. They use the light from
BESSY II or the CoreLabs for their experiments.

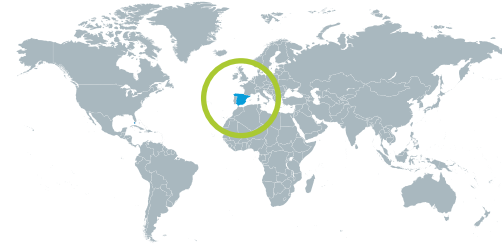


Desserts and pastries

By *Raül Garcia Diez* from *Spain*



“I investigate which electrocatalysts are suitable for water splitting. For this, we carry out in-operando measurements with the light from BESSY II.”



Vegetarian



Desserts and pastries



Panellets

Almond biscuits

Ingredients for 20–25 pieces

- 250 g ground almonds
- 200 g sugar
- 125 g potatoes
- grated lemon peel
- 1 egg
- 60 g pine nuts

Boil the peeled potatoes. When they are soft, drain water and crush with a fork. Then mix ground almonds, sugar, lemon peel and crushed potatoes in a bowl until a compact, homogeneous dough is obtained.

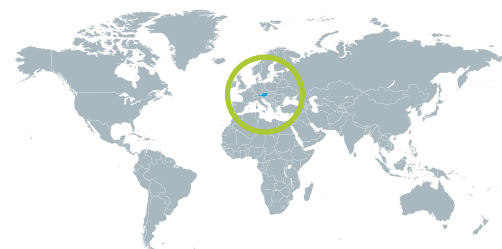
Use your hands to form balls of about 3 cm in size from the dough. Place the pine nuts in a bowl and roll the balls in it until they stick to the surface. Then brush the balls with egg. Preheat oven to 180 °C. Bake the balls for about 5 to 10 minutes until the pine nuts are brown.

“Panellets are a sweet that is only eaten on the 31st of October for the Catalan festival ‘Castanyada’ or on the 1st of November for All Saints’ Day.”

Bon profit!



By Monika Gabernig from Austria



Monika Gabernig worked as a technician in the HySPRINT laboratory, where novel perovskite solar cells are produced.

Vegetarian



Desserts and pastries

Marillenknödel

Apricot dumplings

Ingredients for

10 apricot dumplings

250 g curd cheese
70 g flour (+ some for handling)
70 g semolina
140 g butter or margarine
1 egg
10 apricots (whole with stone,
frozen or fresh)
120 g breadcrumbs
some powdered sugar

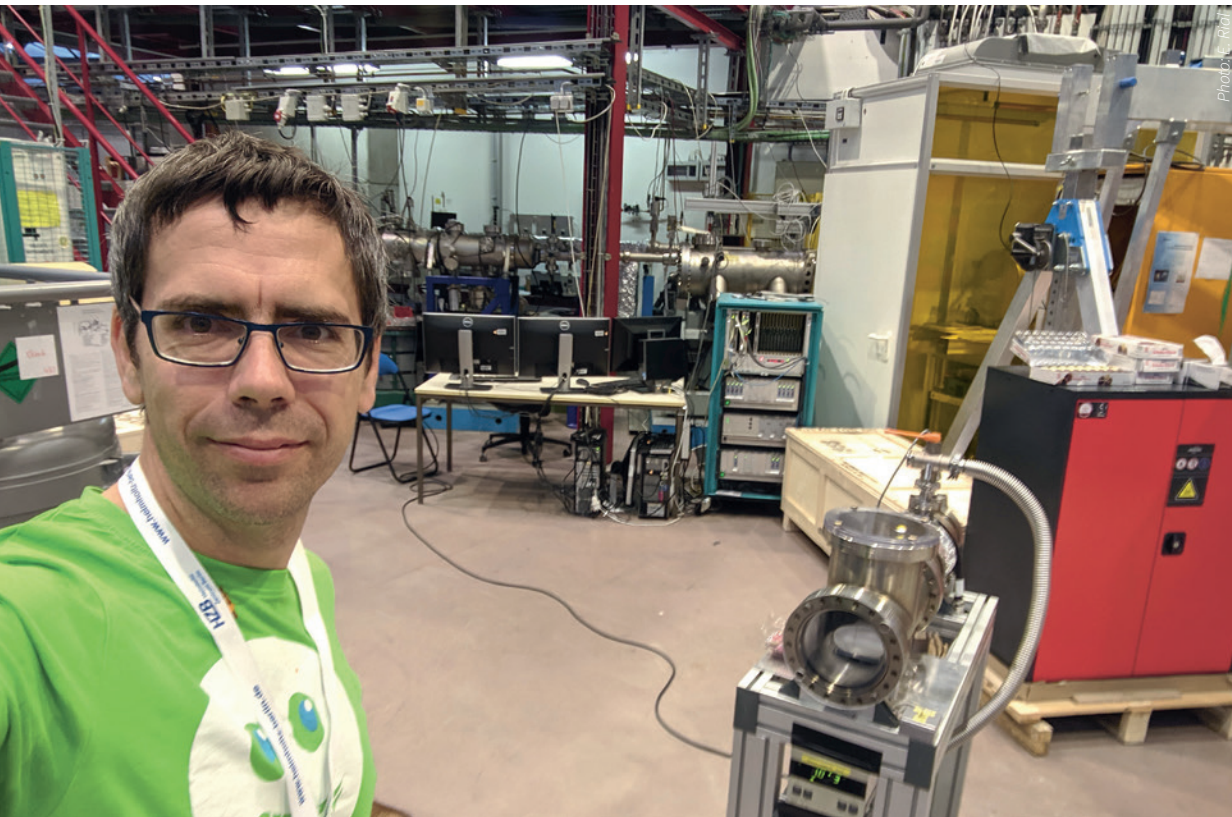
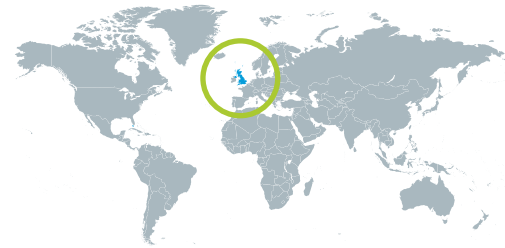
Mix curd cheese, egg, flour, semolina and 70 g melted butter and form a dough. Everything should be well mixed. If the dough is too wet, add some flour or semolina. Put the dough in the refrigerator for about 2 hours. Cover uncut apricots with the curd dough. The dumplings must be formed with wet hands. Make sure that the dough layer is not too thin. When the dumplings are formed, roll them in unsifted flour and then put them in the refrigerator for an hour.

Then place the dumplings in a water bath in a covered saucepan and let it simmer gently and simmer gently for about 10 minutes. In the meantime, melt the remaining 70 g butter in a pan and fry the breadcrumbs in it until golden brown. When the dumplings are finished cooking, strain them and roll them in the breadcrumbs while the dumplings are still wet. Arrange the dumplings on the plate with plenty of breadcrumbs and sprinkle with powdered sugar.

Guten Appetit!

By Edward Rial from Great Britain

“I design, model and build undulators for synchrotron sources – or in other words: I play a lot with magnets. BESSY II is full of innovative accelerator physics and undulator designs. That’s why I love working here.”



Vegetarian



Desserts and pastries

Cherry scones

English teatime treats



Preheat the oven to 200 °C. Put the flour, baking powder and sugar in a large mixing bowl. Add the butter. In another bowl, whisk the egg and milk. Add this mixture to the flour mixture along with the candied cherries but reserve a tablespoon of the egg and milk mixture for coating the cookies later. Knead briefly until dough is smooth. Cut out circles about 1 inches thick. Brush the tops with the egg and milk mixture. Bake for 10–12 minutes until golden brown.

Ingredients for 8 pieces

- 225 g flour
- 1 tsp baking powder
- 2 tbsp sugar
- 50 g butter, cubed
- 1 egg
- 75 ml milk
- 30 g candied cherries, chopped

Tuck in!



Photo: E. Sharples

By Emmy Sharples from Great Britain

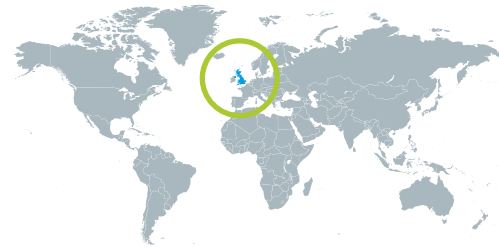


Photo: J. Berthoin

“I am working on the development of superconducting couplers that are used in accelerators. I like the large network here throughout all of HZB, and also across the entire Helmholtz Association.”



Coffee and walnut cake

For a delicious coffee break

Ingredients for 12 pieces

100 g unsalted butter, softened,
plus extra for greasing
100 g sugar
2 large eggs
100 g type 405 flour
1 tbsp baking powder
50 g chopped walnuts
1 tbsp coffee essence or strong coffee

For the filling and topping:

75 g unsalted butter, softened
225 g powdered sugar, sifted
2 tsp milk
2 tsp coffee essence or strong coffee
8 walnut halves, to decorate

Preheat the oven to 180 °C/160 °C fan/gas 4. Lightly butter two loose-bottomed 18 cm/7 in sandwich tins and line the bases with baking paper.

Put the butter, sugar, eggs, flour, baking powder, walnuts and coffee essence in a large mixing bowl and beat together until well mixed and smooth. Divide the mixture evenly between the tins. Level the surface using a spatula or the back of a spoon. Bake for 20–25 minutes, or until an inserted skewer comes out clean. Leave the cakes to cool in the tins for 5 minutes, then carefully turn the cakes out onto a wire rack. Peel off the paper and leave to cool completely.

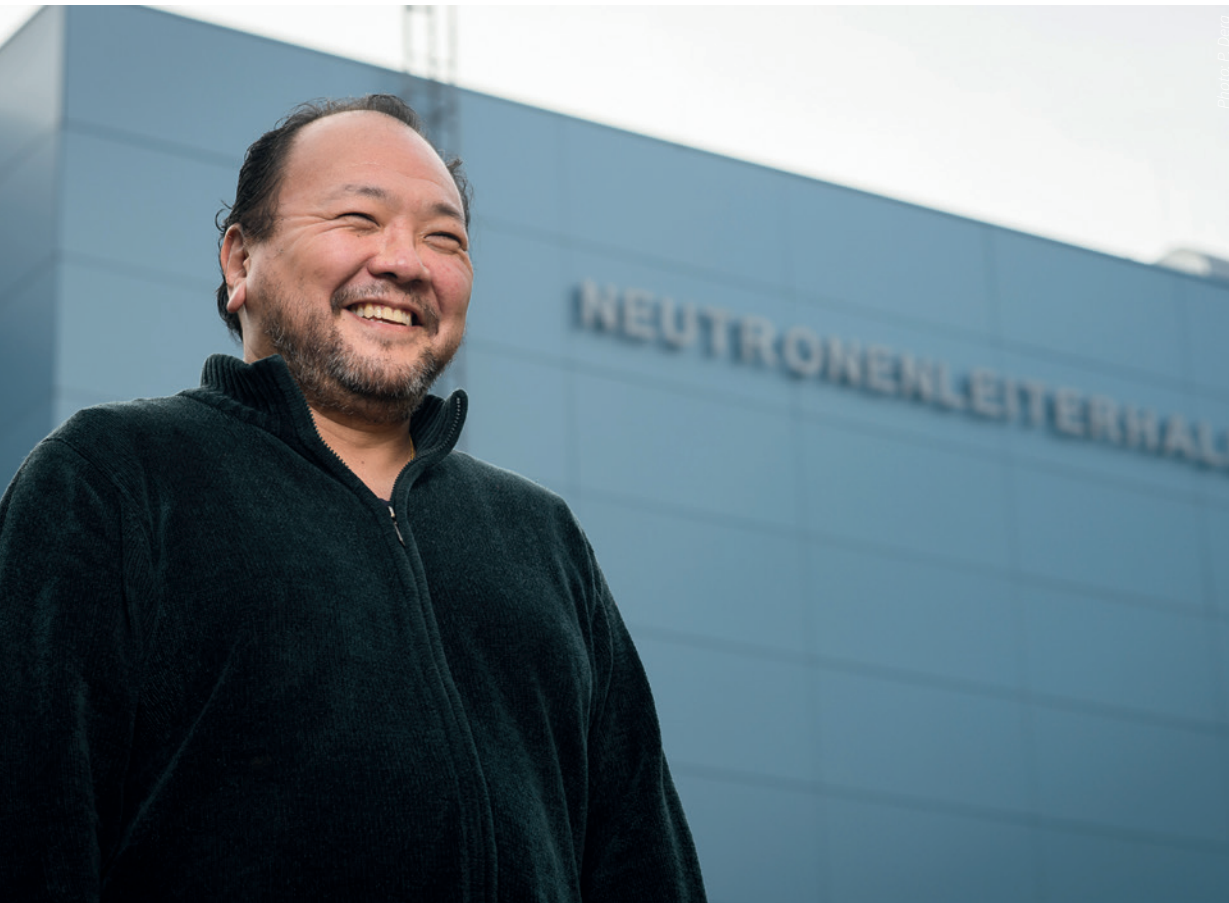
For the filling and topping, beat the butter and gradually add the powdered sugar. Add the milk and coffee essence and beat until smooth.

Choose the cake with the best top, then put the other cake top-down onto a serving plate and spread with half the coffee filling. Sandwich together with the other half. Glazing the top of the cake and decorate with the walnut pieces to serve.

Enjoy!

By Fabiano Yokaichiya from Brasil

Fabiano Yokaichiya worked at the neutron source BER II, which was finally shut down at the end of 2019. His research topics were magnetism, drug delivery systems and composite materials.



Vegetarian



Desserts and pastries

Bolo de fuba

Corn cake

Ingredients for 12 pieces

- 3 tbsp butter
- 2 cups sugar
- 3 eggs
- ½ cup flour
- 2 cups finely ground corn flour
- 1 ½ cups natural yoghurt
- 1 tbsp baking powder

Mix the butter with the sugar. Separate the eggs. Then add the egg yolk and mix everything together. Add the flour, finely ground corn flour, baking powder and natural yoghurt. Then carefully fold in the beaten egg whites. Grease the baking pan and fill with the dough. It is best to use a baking pan with a hole in the middle. Bake at 180 °C for about 45 minutes.

“Bolo de fuba is one of Brazil’s most delicious recipes from the interior of the country. The cake is simple but full of variations and it lives from the creativity of the Brazilians. This recipe is from my friend Margareth Franco.”

Bom apetite!





Photo: M. Seizpland

“I am an event manager in the communication department. I organise scientific workshops, conferences and fair presentations.”

By Sophie Spangenberg from France

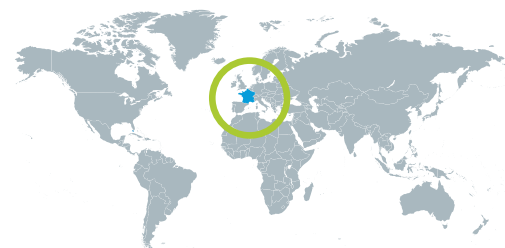


Photo: fotolia



Desserts and pastries

Crêpes

French pancakes

Ingredients for 20 crêpes

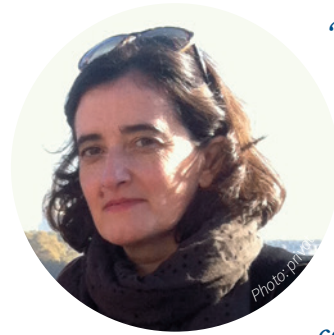
- 250 g flour
- 2 eggs
- 2 sachets vanilla sugar
- 1 pinch of salt
- 1 tbsp sugar
- 500 ml boiled milk
- 1 tbsp oil
- 1 tbsp rum
- 1 tbsp orange blossom water

Put the eggs into a bowl. Then add flour, sugar, salt and vanilla sugar and mix. Add the milk and stir well to make the dough liquid. Then add oil, rum and orange blossom water. Let the dough rest at room temperature for at least one hour. Put a portion of dough in a greased pan and spread. Fry the first side until golden brown, then turn the crêpe in the air with one hand while holding a piece of gold in the other hand - this is what the tradition says.

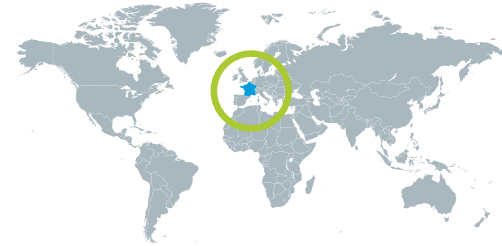
“On the 2nd of February, 40 days after Christmas, the French celebrate the ‘Chandeleur’: the day of the crêpe and the sun’s return after winter.”

Bon appétit!

By Catherine Dubourdieu from France



"I am the head of the 'Institute for Functional Oxides for Energy-Efficient Information Technology'. We conduct research on functional oxide and semiconductor thin films. They are regarded as an interesting class of materials for energy-efficient, cost-effective components."



Vegetarian



Desserts and pastries

Mousse au chocolat

Chocolate mousse

Ingredients for 4 persons

125 g dark chocolate

4 eggs

pinch of salt



Place a small pot in a larger one filled with some water. Put the chocolate - broken into pieces - into the small pot, heat it up and melt it in a water bath. Stir until the chocolate is smooth. Separate the eggs. Remove the chocolate from heat and add the egg yolk while stirring strongly (egg yolk should not be boiled). Beat the egg whites with a pinch of salt until very stiff. Add one or two large spoons of the egg whites to the chocolate and stir to make it a little more liquid. Carefully fold the chocolate mixture into the remaining egg white. Leave to stand in the fridge for 3 hours.

Tips for the perfect chocolate mousse:

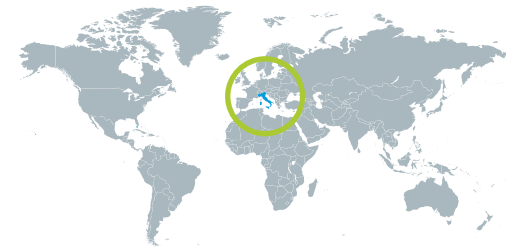
"You don't need sugar. There is enough sugar in the chocolate itself. The egg whites must be beaten very stiffly. Take the eggs out of the fridge ½ hour before you start, they must not be too cold. Don't forget the pinch of salt. If liquid settles under the mousse, either the egg white was not beaten sufficiently or you waited too long before eating it."

Bon appétit!



“My research topic deals with the understanding of the local crystal structure of compositionally complex alloys and its relation to material macroscopic properties such as hardness and elasticity. The local structure can be revealed by X-ray absorption spectroscopy at BESSY II.”

By Andrea Fantin from Italy



Vegetarian



Desserts and pastries



Tiramisu

Italian layer dessert

Ingredients for 10–12 persons

1000 g mascarpone
10 tbsp sugar
10 eggs
800 g lady fingers
espresso
some cocoa powder

Split eggs in yolk and white. Mix mascarpone with egg yolks and add sugar. Use a mixer to beat the egg whites until soft, but dense snow forms. The snow must be very dense. Test by turning the bowl upside down for a short time. The snow should not fall out. Then mix the snow with the sugar-egg-mascarpone mixture. This is called crema di tiramisu (tiramisu cream).

Dip the lady fingers in fresh espresso. Fill a bowl alternately with a layer of tiramisu cream and a layer of espresso lady fingers. End with a layer of tiramisu cream and sprinkle with cocoa powder. Put in the fridge and wait at least one night.

“If you have done a good job, the bottom layers should not be liquid. If they are just liquid, invite me over for a coffee and we can solve the problem while tiramisu-tasting.”

Buon appetito!

Helmholtz-Zentrum Berlin für Materialien und Energie

Researching for a climate-neutral society

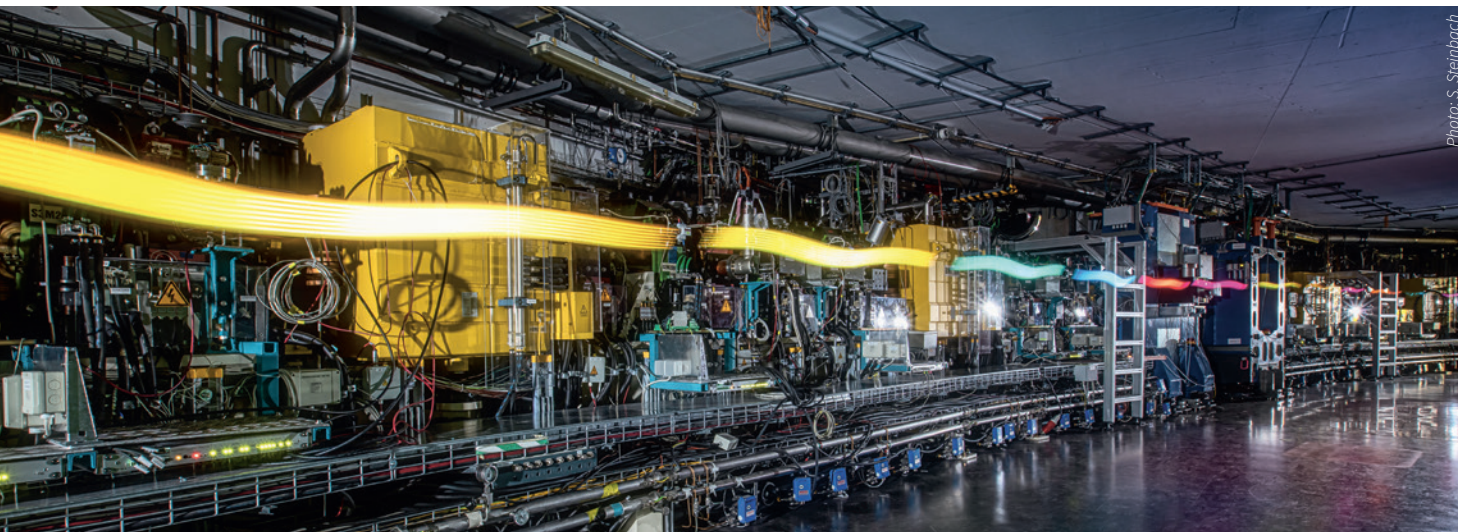


Photo: S. Steinbach

HZB's research is helping to develop solutions for a climate-neutral energy supply of the future. On our two campuses in Berlin-Wannsee and Berlin-Adlershof, we are researching new materials and technologies for efficient solar cells, batteries, catalysts for producing green hydrogen, and much more. For this research, we operate the electron storage ring BESSY II in Adlershof, which provides light of very high brightness. Many scientists from many countries use this light to investigate materials

and discover their useful properties. Their insights help us to develop components and scalable technologies relevant to industrial production. Our international research teams are supported by administration, IT, and technical infrastructure departments. HZB currently employs around 1,200 people. We belong to the Helmholtz Association, which is Germany's largest research organisation with 18 centres and 43,000 employees.

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Helmholtz-Zentrum Berlin für Materialien und Energie GmbH

Hahn-Meitner-Platz 1, 14109 Berlin, Germany

Phone: +49 30 8062-0

Authors: Jennifer Bierbaum, Felicia Laberer, Anja Mia Neumann, Antonia Rötger, Silvia Zerbe

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